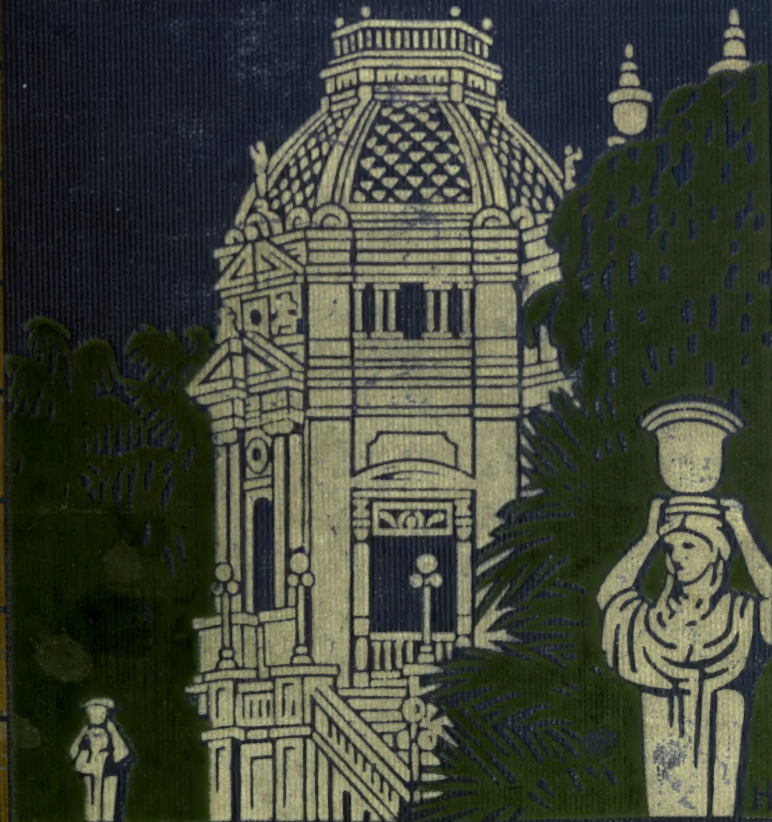
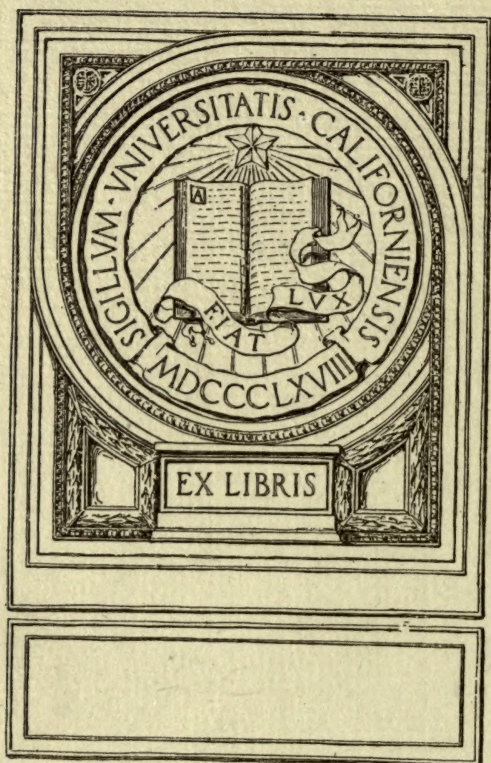


THE SOUTH AMERICAN TOUR

ANNIE S. PECK





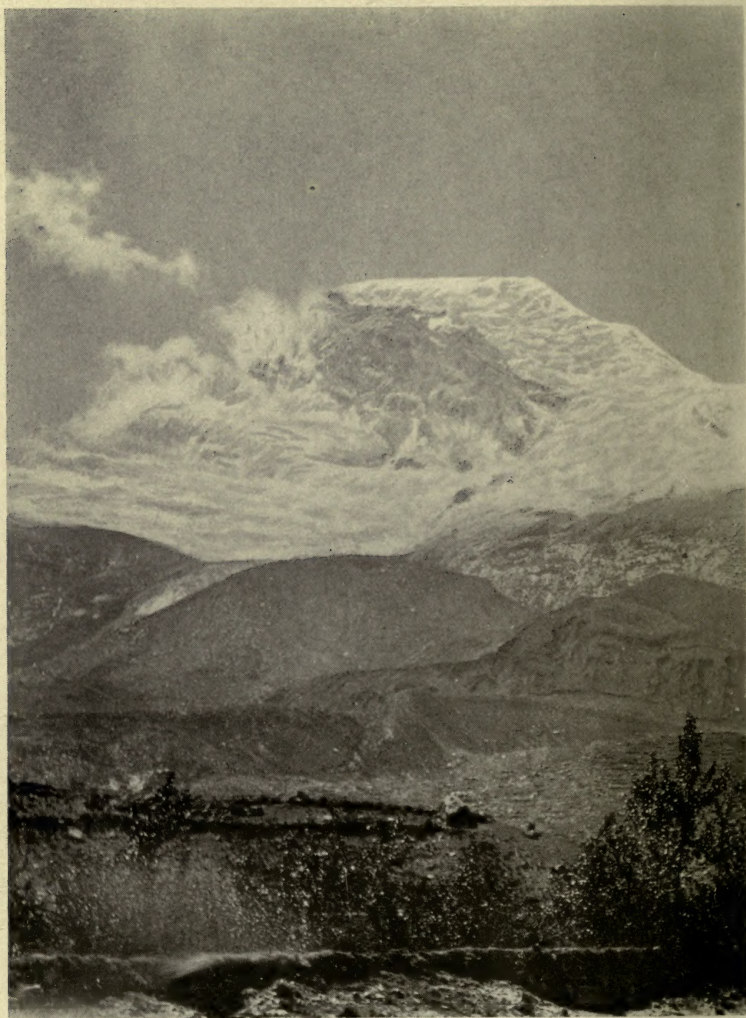


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THE SOUTH AMERICAN TOUR

THE
CAMP

TO THE
ASCENDING



NORTH PEAK OF MT. HUASCARÁN, 21,812 FT.

THIS PEAK, ASCENDED BY MISS PECK, SEPTEMBER 2, 1908, IS 1,500
FEET HIGHER THAN MT. MCKINLEY.

THE SOUTH AMERICAN TOUR

BY

ANNIE S. PECK, M.A.

Author of "A Search for the Apex of America"

*ILLUSTRATED CHIEFLY FROM
PHOTOGRAPHS BY THE AUTHOR*

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INTRODUCTION

I congratulate Miss Annie S. Peck, the publisher of this book, and those who consult or read it, upon the preparation of a work of this character. Interest in Latin America is now so rapidly growing throughout all the world, and especially in the United States, that a descriptive guide-book of this kind regarding the regions commonly visited by tourists has become an actual need; such a work by Miss Peck is a practical and timely contribution to the literature of the day. There are few persons better qualified to write a book of this character. The remarkable explorations which Miss Peck has undertaken in the most difficult sections of Latin America, and the traveling she has done in all parts of it, not only have provided her with a vast fund of useful information about the countries of South America but give especial authority to what she writes. Her book contains in compact form an amount of definite information concerning the countries considered, which should place it in the forefront of works of this character.

While, of course, it is impossible for the Pan American Union, as an official organization, and myself, as its official head, to endorse in any way a particular book or accept responsibility for the statements and views it contains, it gives me real pleasure, from a personal standpoint, to express the hope that this work of Miss Peck will have a wide circulation and prove of decided help in promoting travel to and through the Latin American countries.

The Pan American Union, which, as readers of this book probably know, is the office of all the American republics—the United States and its twenty sister Latin American countries—organized and maintained by them for the purpose of developing commerce, friendship, better acquaintance, and peace among them all, is doing everything possible and legitimate to persuade the traveling public of the United States and Europe to visit the Latin American countries and become familiar with their progress and development. There is no

influence in the world that helps more to advance friendship, comity, and commerce among countries than travel back and forth of their representative men and women. Nearly every person who visits Latin America under the advice of the Pan American Union, upon his or her return, writes a letter expressing appreciation that this opportunity has been afforded of seeing these wonderful countries of the south.

In conclusion, I would observe that if those who may become interested in Latin America through reading Miss Peck's book desire further information about any or all of these republics, the Pan American Union will always be glad to provide them with such data as it may have for distribution.

JOHN BARRETT,

Director General of the Pan American Union.

Washington, D. C., U. S. A.,
October, 21, 1913.

FOR EVERY ONE

TO ALL Americans both of the Northland and of the South this book with due modesty is inscribed, in the hope that by inciting to travel and acquaintance it may promote commercial intercourse, with the resulting ties of mutual benefit and respect: in the hope, too, that the slender cord now feebly entwining the various Republics may soon draw them all into more intimate relations of friendship; at last into a harmonious Sisterhood, in which neither age nor size shall confer superior rights, but mutual confidence based upon the foundations of justice shall insure perpetual peace.

The opportunity is here improved to express my grateful acknowledgment of kindly assistance and attentions of diverse character, received throughout my travels from many of my own countrymen, from Englishmen invariably interested and ready to aid, and from the ever courteous and helpful Latin Americans: officials and private individuals, with members of my own sex. As a complete list of these would be too long I permit myself the mention of those only who are entitled to especial recognition, our Minister to Bolivia, 1910-1913, the Honorable Horace G. Knowles, and the Governments of Bolivia, Chile, and Argentina, without whose prompt and substantial aid this work would have been impossible. That its usefulness may be such as to convey to them a valid return is my earnest aspiration.

The indulgence of critics and of tourists is sought for errors (few, I trust) and deficiencies which may be discovered. These and other faults will have crept in on account of a preparation somewhat hurried that the book might earlier be of service, and from the impossibility of securing on some points exact and adequate information, in spite of diligent investigation and careful scrutiny of facts and figures.

Many items of interest and importance have been omitted lest the book should be too long. The selection of material it

is hoped will be suitable to the general reader, though doubtless every one will find topics presented to which he is indifferent and others neglected which appear to him of greater consequence.

Hours have been spent in searching for the best authority as to widely different figures and even as to varying accents and spelling. In the absence of other information a few statements have with some trepidation been copied from authors whose recognized blunders have made their unverified observations appear questionable.

While a different statement made by some other, albeit notable writer cannot be taken as conclusive evidence of error, any just criticism or suggestion presented to the author will be gratefully received and considered with a view to incorporating it in a subsequent edition.

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ACKNOWLEDGMENT

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THE SOUTH AMERICAN TOUR

FOREWORD

The South American Tour! "*Como no?*" "Why not?" as many Spanish Americans say when they wish to give hearty assent. Have you been around the world? Do you travel for pleasure or business? Whatever your object, whether your purse is full or you wish to fill it, the southern half of our hemisphere is a land which should not be ignored.

What is there to see? May the journey be taken in comfort? These things shall be revealed in detail after a few general facts have been presented.

Is the enjoyment of scenery the chief aim of your travel? With ease you may behold some of the finest in the world,—much more if you care to take a little trouble: snow clad mountains galore rising above 20,000 feet, dwarfing the Alps into insignificance, giants to be admired not only from afar as tourists in India gaze upon the Himalayas, but from nearer points, even from their very foot; smoking volcanoes, cliffs more lofty than those of the Yosemite, wonderful lake scenery including the highest sheet of water (12,500 feet) where steamboats ply; strange yet fascinating deserts; wondrous waterfalls, one of these surpassing Niagara in height, volume, and beauty; magnificent tropical vegetation and forests, the highest railroads, the most picturesque and beautiful harbor of the world. All of these, with the exception of the great cataract, are easily accessible, and form a combination of scenic attractions unsurpassed in any portion of the globe.

Do strange people and cities interest you more? You may wander in towns old and quaint, containing buildings of centuries past, and in cities quite up to date growing with the rapidity of our own. In a few places Indians in peculiar garb may be seen by the side of Paris gowns and English masculine attire, in others an Indian with sandals, hood, and poncho would attract as much attention as on Broadway.

FOREWORD

Several cities have boulevards, parks, and opera houses finer than any of which North America can boast.

Do you care for ruins, antiquities? These also abound. Whole cities of the dead are there, and others where the new civilization rises above or by the side of the old. Temples, palaces, fortifications, ancient statues, mummies, and pottery may be cursorily admired or profoundly studied, and search may still be made for undiscovered monuments of a pre-historic past.

These countries rapidly advancing, with astonishing mineral and agricultural resources awaiting development, with railroads to be laid, with fast growing markets for almost every kind of merchandise, invite the trader and the capitalist to investigate hitherto neglected opportunities before it is too late.

Well informed as to what there is to see, the possible tourist is certain to inquire if the journey will be comfortable. Perhaps, indeed, the order of the questions should be reversed; for few, I greatly fear, would be tempted to say "Let us go!" if the tour involved any hardship. Happily this is not the case. Though the *Imperator*, the *Mauretania*, and the *Olympic* do not yet sail in that direction, the names of several steamship lines which serve the traveler to Panama, or Buenos Aires are a guarantee of comfort and of sufficient luxury. The steamers elsewhere are commodious, having for the most part state rooms provided with electric fans, and satisfying all reasonable requirements. The railroads in the various countries have the usual equipment. The hotels, if one does not depart from the ordinary line of travel, will in general be found satisfactory, providing excellent food, good beds, etc., and in those cities where some little time should be spent meeting the wants of all except the ultra fastidious tourist.

If we do not sympathize with the cry "See America *first*," bearing in mind that America is the whole and not a fraction of the Western Continent, at least, when we have seen the Old World, instead of ever retracing our steps in familiar ways, let us seek the strange *New World* beyond the equator where a brief tour will reveal a multitude of scenes amazing and delightful, even to the experienced traveler.

THE SOUTH AMERICAN TOUR

CHAPTER 1

WHAT THE TOUR IS—HOW AND WHEN TO GO— WHAT IT COSTS

The South American Tour, rapidly becoming fashionable and popular, and about to be described, includes the most interesting and accessible portions of that continent,—its finest scenery, its greatest cities. A wonderful variety in the swiftly moving pictures prevents any dullness on the part of the intelligent traveler, who is ever kept alert for the continually fresh experiences of this remarkable journey.

Where. My tourist party will be conducted first to Panama, where soon the sail from ocean to ocean through an immense artificial channel will awaken sensations of wonder and pride. The opportunity then to continue in the same vessel along the West Coast of South America, invaluable for commerce and for those on business bent, may prove a disadvantage to the pleasure traveler, by tempting him to pass with a mere glance the City of Panama and other spots worthy of observation.

On the Pacific side Peru, Bolivia, and Chile will be visited by every one: a few may make the side trip to Ecuador,—Guayaquil and Quito. In order to return along the East Coast one may complete the circuit of the continent by sailing down, through the Straits of Magellan, past Punta Arenas, and up on this side, or with the greater number may cross the Andes by rail, thus to reach the metropolis of South America, Buenos Aires. Thence, after, or if not including, an excursion to Paraguay and to the greatest of American waterfalls, the Iguassú, one may sail to Montevideo in Uruguay,

from there to Brazil, returning from Rio de Janeiro directly to New York, or by way of Europe as preferred. Similarly the trip may be made from *Europe* by several lines of steamers direct to Panama, or more quickly by way of New York, with a return from Rio.

Altogether omitted from this itinerary are the countries on the northern shore of South America. Of these Colombia and Venezuela are better included in a West India trip. The Guianas by ordinary tourists are neglected.

Obviously the journey may be made in either direction: as above, or in reverse order; but unless the season of the year invites a change the former sequence should by all means be followed. Thus taken the journey is one of ever increasing interest, until its culmination in the delightful harbor and city of Rio de Janeiro. Not that Peru is inferior to Bolivia and Chile, or Buenos Aires to Rio, let me hasten to add; each has its own peculiar charm; but one who begins with the West Coast will find the entire journey far more enjoyable and impressive.

When one should go depends more upon when one wishes to leave home than upon the conditions prevailing in South America; also upon one's individual taste as to temperature. In brief, one may safely make the trip whenever it suits his convenience. Bearing in mind what so many seem to forget, that the seasons are reversed in the northern and southern hemispheres, one may leave home to escape either heat or cold, or to avoid March winds, as he may elect. In none of the countries to be visited is the variation between winter and summer so great as in the latitude of New York, nor is the tropical heat anywhere on the journey so intense as that on many days of every summer here.

Leaving the United States on a four months' tour at any time between the middle of November and the last of August, I strongly advise one to visit the West Coast first. During the remaining three months, one who dislikes hot weather might better begin with Brazil. In December, January, and February, the mercury at Rio is mostly in the eighties. In January I found it comfortable enough for summer weather, but I needed the ten degrees lower temperature of an earlier or a later season to make my visit absolutely ideal.

With a delightful climate during *nine* months of the year, the city at any time is perfectly healthy; since the yellow fever, formerly a dreaded scourge, was stamped out at Rio during the same period that this was accomplished in Panama.

Buenos Aires also may be more advantageously visited during the cooler weather, both because the opera and social festivities are then in full swing, and because one is likely to be more energetic for sight-seeing, of which there is much to be done. In Peru and Bolivia, on the usual route of travel it is never hot enough to be troublesome. Chile, in the central and most visited portion, is a trifle less agreeable during the southern summer than in spring or fall, especially on account of the dust, but this matters little for a brief stay.

Four months should be allowed for the trip. A couple who made it in three, though delighted with their journey, mourned over the unavoidable omissions and were planning to go again. Six months is not too much; a whole year could be profitably employed: but in four months or a trifle more, one may visit the most important places and gain a fair idea of the various countries. The personally conducted parties for three months only are well worth while.

The expense of the trip will naturally vary according to the time and extent of the journey and the economy or extravagance of the tourist. A round trip ticket from New York to New York, good either by the Straits or across the Andes, may be purchased for \$475, or including a return by way of Europe for \$505. Additional expenses may be from \$500 or less to \$1000 or more according to the person, the time, and the number of side trips taken. By several tourist agencies personally conducted parties are semi-annually dispatched to South America at a cost varying from \$1375 for a tour of 98 or 99 days to \$2250 for 146 days. Also the Hamburg-American Line has sent a ship around to Valparaiso by way of the Straits. Tickets \$475 to \$3000; optional extra shore trips \$300 or more. On the completion of the Canal they will probably have a ship making the entire circuit.

Persons who prefer to be relieved of care, or who do not speak Spanish, the language current at all points of the journey save Brazil, and there understood by educated people, will do well to join a party, especially if their time is limited.

Those who can devote a longer period to the trip and who like to do their own planning may see more by themselves at either greater or less expense. One who speaks only English, by keeping to the main line of travel and patronizing the leading hotels, should have no serious difficulty; though it is, of course, an advantage, readily gained by one who is familiar with Latin or French, to have some acquaintance with Spanish, an easy and beautiful language. A bare smattering picked up from a phrase book on the voyage is better than nothing, while a conversational knowledge greatly enhances the pleasure and profit of the journey.

Baggage. In regard to baggage, the less taken the better, both on account of the expense and because of the care it entails; yet it is well to have a fair supply of good clothes, since evening dress is everywhere more strictly *en règle* than in most parts of the United States. The steamships are not all rigid as to the precise amount of baggage, though the allowance on different lines varies from 150 to 400 lbs.; the railroads are strict and extra baggage is expensive; only 100 lbs. are allowed. Going up to Bolivia by the Southern Railway of Peru, a heavy box or two may cost as much as the ticket. Many tourists take only hand baggage to Cuzco and La Paz, leaving on board the steamer their heavy pieces, to be reclaimed later at Valparaiso. On all roads, the hand baggage goes free; hence suit cases, etc., are much in evidence.

Clothing. One needs a supply of both light and heavy weight, the proportion of each depending upon the season of the year. Always by way of the Isthmus there are eight or ten days of summer weather en route, and several weeks during the East Coast journey. Along the seaboard of Peru and Chile woolen or heavy underwear may be desirable for many, as on the highlands of Peru and Bolivia; also in Chile and Argentina during their winter season, when a temperature in the forties and fifties will be experienced; some hotels have no fires, and the nights and mornings are chill. On the mountain railways, as during a portion of the sea voyage, wraps and rugs are needed in addition to moderately heavy clothing. Furs though unnecessary may be found agreeable during the months of winter, June to September.

Money may be carried in letters of credit on W. R. Grace or

other bankers, or by American Express or Travelers' Cheques, together with a moderate supply of gold, preferably in English sovereigns. The English pound, being precisely the same as the Peruvian, is interchangeable with them; in other countries it is more acceptable and convenient than American gold, though in the large cities either will be readily exchanged. A point to be noted and *remembered* is that most resident Americans and English, a few natives, and travelers in South America generally, speak of certain coins, *soles* or *pesos*, as dollars; a poor custom which should not be imitated. Since it is prevalent, one must be on guard to avoid mistakes. In Panama a clerk or a coachman saying twenty cents or one dollar means silver; *i. e.*, 10 and 50 cents, United States currency. A man in Lima who speaks of twenty dollars probably means *soles*, practically ten dollars. In Bolivia a *bolivian* is about 40 cents, a *peso* in Chile is 22 cents more or less, in Argentina 44, in Uruguay \$1.04; in Brazil a *milreis* is 33 cents. All of the countries divide their unit decimally, and if it were not for the foolish custom of English speaking folk, there would be no confusion. In this book the words dollars and cents and the sign \$ will everywhere signify United States currency; otherwise the names employed by the respective countries will be used, as *soles*, *pesos*, and *centavos*. In connection with Brazilian money the sign \$ is put after the number; thus 15 *milreis* is written 15\$000.

CHAPTER II

THE VOYAGE TO PANAMA

IN 1903, before the United States' occupation, there was no choice as to means of transport to the Isthmus. A single steamship company, that of the Panama Railroad, dispatched a vessel from New York once a week. Now there are four different lines with as many weekly sailings, besides one from New Orleans, a more convenient point of departure for many south of Mason and Dixon's line. The four companies, all with headquarters in New York, will gladly furnish the latest information in regard to their own sailing and accommodations as on other points in reference to the tour.

Fares. The lowest fare from New York to Colon, \$75.00, to Panama, \$78.00, is the same on all lines, better accommodations being provided for a supplementary fee of from \$15.00 up. It is wisdom to purchase, if not a ticket for the round trip, one as far at least as Mollendo, \$191, as a slight reduction is made on through tickets. Stop-overs are allowed at any of the ports of call, and on the East or West Coasts of South America the journey may, if more convenient, be resumed on certain other lines of steamers without extra charge, save for embarking or disembarking in the small boats.

The respective merits of the four steamship lines to Panama are a matter of opinion. On three of these I have enjoyed the voyage, especially my last in a luxurious suite on the *Prinz August Wilhelm* of the Atlas Hamburg-American Line.

The old PANAMA COMPANY claims that its boats are provided with all of the comforts afforded by the others, including rooms with private baths. It has slightly irregular sailings, seven a month, with several steamers making the journey in six days, instead of the seven, eight, or nine occupied by ships of the other lines. Those who prefer American cooking or the shorter voyage will choose one of these ships.

The ROYAL MAIL and the HAMBURG-AMERICAN lines are quite similar to each other in service and accommodations; the boats of the former sail for Colon on alternate Saturdays, calling on the way at Antilla, Cuba, and at Kingston, Jamaica: those of the latter sail every Saturday, touching at Santiago de Cuba and Kingston. The Royal Mail Steamers are scheduled to arrive at Colon on Sunday, eight days from New York, connecting with the P. S. N. boats departing on Monday for the south. But through tickets are good by any of the three lines on the other side; and one may delay on the Isthmus for a few days or weeks of sight-seeing. The Hamburg-American steamers arrive at Colon Monday, one week connecting with a P. S. N. steamer, the next with one of the Peruvian and another of the Chilian Line sailing the same afternoon. No one, however, who is making a pleasure trip should cross the Isthmus without staying over a few days.

The UNITED FRUIT COMPANY boasts of a great white fleet with four sailings to Colon a week; two, on Wednesday and Saturday, from New York; and two on the same days from New Orleans. These ships, they say, are the only ones going to Colon which were designed and built especially for tropical service, thus having all of the latest devices for comfort as well as for safety. Among these are bilge keels and automatic water-tight compartments. A wireless equipment as a matter of course the boats of all lines carry; these have also a submarine signal apparatus, to give warning of the proximity of another vessel, and, as an especial feature, lifeboats which with a patent lever may be swung off and lowered by a single man. By the system of ventilation the temperature of the rooms at night may be kept down to 55° if desired, a boon to many on the muggy Caribbean; and the electric lights have the rare quality of burning low. All of the boats on the various lines have pianos and music, most of them cards, checkers, chess, and libraries, the United Fruit Company supplying the latest magazines.

The Saturday steamers of this line from New York call Thursday at Kingston, Jamaica, where they remain until two p. m. Friday. They are due at Colon at noon on Sunday. The Wednesday steamers take a day less for the trip; at Kingston where they arrive on Monday they remain from 7

a. m. till 4 p. m. The Isthmus is reached at 1 p. m. on Wednesday.

Via New Orleans. The opportunity to go by way of New Orleans may appeal, especially in winter, to some who have not visited that city and to those who desire to avoid the possibility of two or three cold stormy days on the sea before entering the regions of perpetual summer. The steamers sail in five days to Colon, the Saturday boats arriving Thursday a. m. and the Wednesday boats Monday morning.

The voyage to Panama, indeed all of the six or seven weeks on the sea, which are a necessary part of this tour, will be likely to prove an agreeable experience even to those who as a rule do not enjoy the ocean. While the waters of the Atlantic may at any season be turbulent and tempestuous, the portions of both oceans which are to be traversed are for the most part so smooth that unless persons are *determined* to be seasick whether they have occasion or not, it is probable that they will suffer little or none from this unpleasant malady. Ordinarily the sail to Panama, under sunny skies, over unruffled seas, in weather, after a day or two, warm enough for summer clothing, is a pleasure unalloyed. On the Caribbean it may be a trifle muggy and sticky, but if favored with sunshine the wonderful blue of the waters, deeper than that of the Bay of Naples, affords solace. On some of the ships a little dance on deck, if happily under a tropical moon, may be an experience affording delightful memories.

Watling's Island. After leaving New York harbor and the adjoining coast the first land to come within range of vision is that of Watling's Island, noted for a lighthouse of great power and value. Otherwise unimportant, it acquires interest from the fact that on this shore Columbus is believed to have made his first landing in the Western World. The island is thus entitled to the more pretentious name, San Salvador, bestowed by the great explorer upon the land where first he trod in devout thanksgiving, after many weeks of painful suspense upon the limitless ocean.

Fortunate is the traveler who towards sunset enters *Windward Channel*, passing before dark the desolate wooded bluffs of the eastern extremity of Cuba, *Cape Maysi*, and later having a look at the southeast shores where rise sombre, forest

covered peaks to an imposing height, the loftiest above 8000 feet. From a Panama or United Fruit Company steamer no more will you see of Cuba; but on a boat of the Royal Mail you will already have called at ANTILLA, in the eastern section of the island's northern shore, a new and growing seaport on Nipe Bay, and the north terminus of the Cuban Railway. Extensive docking facilities have been provided, large warehouses, immense tanks for molasses, a good hotel: and plans are made for building here a great commercial city.

Santiago de Cuba. By the Hamburg-American Line the first call is made on the south side of the island at the more famous and considerable city, Santiago de Cuba, which, founded in 1514, is said to be the oldest settlement of size in the Western Hemisphere. With a population of 50,000, among Cuban cities it comes next to Havana. It has also historic interest. That Hernando Cortez from this port, Nov. 18, 1518, set out for the bold conquest of the Aztec Empire is a fact less widely known than the more recent circumstance that in this sheltered harbor the fleet of Admiral Cervera lay concealed, until July 3, 1898, it sailed forth to its doom. In the narrow portal, less than 600 feet wide, rests the old *Merrimac*, sunk by Lt. Hobson and seven others, June 3, 1898. On the right of the entrance, crowning a bluff 200 feet high, is the old Morro Castle, an ancient fortress of picturesque appearance, begun soon after the founding of the city and possessing towers and turrets in genuine mediæval style. Six miles farther, at the head of the bay, on a sloping terrace with steep hills behind, is the bright, gay city; though at the noon-tide hour it may seem a trifle sleepy and dull.

If time permits, a drive on the fine roads will be enjoyed. To the *San Juan* battlefield three miles distant and to *El Caney* a little farther the fare is \$1.50 for a single person, \$2.00 for several. The longer drive to *Morro Castle*, fare \$3.50, affords charming views. In the city one proceeds first to the plaza, where on one side is the great cathedral called the largest in Cuba, containing rare marbles and mahogany choir stalls. On the other sides are the Casa Grande Hotel and the Venus Restaurant. Near by is the Filarmonia Theatre where the famous *diva*, Adalina Patti, is said to have made her début. A few may care to visit the spot where the Captain and sail-

ors of the *Virginius* were executed as filibusters in 1873, a slaughter pen near the harbor front to the east of the Cuba Railway Station. An inscribed tablet there commemorates the sad event.

Kingston, Jamaica, is visited by all of the steamers except those of the Panama Line, the Wednesday boat of the United Fruit Company having previously touched at *Port Antonio* on the northeast end of the same island; the port, a busy place, owing its present prosperity chiefly to our fondness for bananas. Captain Baker of Boston in 1868 began the trade which the United Fruit Company has developed to immense proportions. The splendid Hotel Titchfield which the company has erected affords every facility for a delightful summer outing during our winter season.

The older and larger city of *Kingston* is on the south side of the island, by the excellent and far famed harbor of Port Royal. The town of that name, ancient rendezvous of Morgan and the buccaneers, once stood on the long sandy spit which separates the bay from the ocean. But on a day in 1692 occurred one of those memorable tragedies at which the whole world stands appalled. The earth was shaken. The city sank beneath the sea, where it is said that some of the buildings may yet be seen, when the waves are still, deep down below the smiling tranquil surface. Kingston, then founded on the main shore, recently suffered (January 14, 1907), as we well remember, a similar though less complete disaster, being merely shaken down instead of swallowed up. Like San Francisco it was promptly rebuilt with better architecture. Quite up to date with electric cars and other modern conveniences, it is an attractive place of scenic and tropical beauty, excellent too for shopping. Interesting are the markets, the old Parish Church, badly shaken, but still standing; the main streets, King and Queen, at right angles to each other; the Jamaica Institute with museum and library where among other historical curios may be seen the famous Shark papers, in 1799 thrown overboard, swallowed by a shark, but soon after rescued from his maw, to the discomfiture of the Yankee captain of the *Nancy*, an American privateer. In the suburbs of the city within easy reach is King's House, the fine residence of the Governor-General. Worth visiting (electric

cars) is Hope Gardens, an estate of 220 acres, with a fine collection of indigenous plants and many exotics. The splendid roads over the island, the possibilities for delightful excursions,—the most enchanting the ascent of Blue Mountain, 7423 feet,—would tempt to a longer stay. But we hasten onward to more distant and greater glories.

Western Tourists. Tourists living west of the Rocky Mountains may prefer to sail from *San Francisco* or *Los Angeles* to Balboa, the port of *Panama*, at a considerable saving of expense, though not of time. Express steamers twice a month make the voyage from San Francisco in 14 days with the single call at San Pedro (Los Angeles), fare \$85; while three times a month there are other boats which do not stop at San Pedro, but make eleven calls in Mexico and Central America, thus affording opportunity to see some of those ports, consuming 26 days on the trip. On these steamers the fare is \$120. All these boats are of the Pacific Mail Steamship Company. By way of New York the journey from San Francisco to Panama may, with close connection, be made in 10 or 12 days.

European Tourists may sail from Southampton by Royal Mail steamer in 18 days to Colon, fare \$125, or from Cherbourg, 17 days, fare \$100.

Other companies which have steamers sailing from Europe to Colon are the Hamburg-American, four times monthly from Havre and Hamburg, the Leyland C. Harrison, three times a month from Liverpool, the Cia. Generale Transatlantica, once a month from St. Nazaire and once from Bordeaux, the Cia. Transatlantica and the Cia. La Veloce, each monthly from Barcelona and Genoa.

CHAPTER III

THE ISTHMUS—THE CANAL—COLON

Two days from Jamaica, six, seven, eight, or nine from New York, one arrives at Colon, eager to witness the wonderful operations now well-nigh concluded, or to behold the finished work, when great ships, no longer halting at the Atlantic shore, shall, through a broad channel among green hills and islands, sail onward to the serene Pacific. Every one knows of the marvellous transformation on the Isthmus during the last ten years, but the most imaginative person, now arriving for the first time, will hardly fancy what it was like in 1903.

Colon, once called the most repulsive, disagreeable, filthy hole of a place in all Christendom, though always a pretty picture *from the sea*, is at present fair enough on land. The climate only remains unchanged. It still rains—and *rains*: 130 inches a year: not all the time even in the rainy season, which it is very apt to be, as that continues eight months, from the first of May to January, leaving a dry season of only four. Even in this period it is liable to rain, so it behoves every one to be provided with raincoat and umbrella, if not with overshoes. Everywhere there are good walks and in the towns, paved streets, beyond which the tropical sun soon dries the mud.

The agreeableness of the Isthmian climate as a whole and in various localities, if to some extent indicated by figures, is largely a matter of individual temperament. With little difference in temperature Colon has double the rainfall of Panama with a corresponding excess of humidity. Yet happily for the welfare of the great work and the workers, it has been the fashion on the Isthmus for every one to have local pride; to like his own station the best, whether on either shore, or in one of the pleasant villages along the line. It is genuine summer weather all the year around; not excessive heat, like

our days in the 90's and 100's; but mostly in the plain 80's by day, with cooler and comfortable nights.

HISTORICAL

This section of the New World was first visited in 1501 by Columbus, who touched at Nombre de Dios and Porto Bello east of Colon, perhaps sailing into Limon Bay; this he certainly did in 1502, naming the place Puerto Naos, Navy Bay, as it was called until recent years. It is just 400 years ago, September 25, 1513, that Vasco Nuñez de Balboa first saw the great Pacific, then named the South Sea,—not, as often said, from the hill near Gorgona, called Balboa, more properly the Cerro Gigante, but from another 120 miles east, as he was crossing the San Blas country. Thence he continued to the Bay San Miguel of Darien. This bold explorer, like many another, fared badly. He was beheaded a few years later at the age of forty-four. In 1519 the site of an Indian fishing village near the farther shore was selected by Governor Pedrarias as that of his future capital, and in 1521, it was made a city by royal decree. This was *Old Panama* which soon became a place of great wealth and luxury, as for a century or more the rich treasures of Peru passed by this route to Old Spain. Yet it suffered many vicissitudes from fires, buccaneers, and insurrections till at length, when its prosperity had already begun to wane on account of the ships going by the Strait of Magellan, it was captured, plundered, and destroyed, by the freebooter, Henry Morgan, January 19, 1671, never to be rebuilt. January 21, 1673, the new city of Panama, about four miles distant, was dedicated. Until 1821 the Isthmus was under the dominion of Spain, and after that, in spite of numerous insurrections, remained a part of the country of New Granada, later Colombia, until its sudden practical transfer to the United States. On November 3, 1903, its independence was proclaimed, on the sixth the infant Republic was recognized by the United States, and on February 26, 1904, a treaty with the United States was signed by which it became a Protectorate, with a position similar to that of Cuba.

As early as 1527 an explorer from Panama city went from the Pacific up the Rio Grande Valley, crossed the divide by Culebra and sailed down the Chagres River to the Atlantic Ocean. Soon this was a popular route,—to sail up the Chagres to a point fifteen miles from Panama and continue by land to that city. As early as 1534 the idea of a canal occurred to that great monarch, Charles V, who had a route surveyed. Pronounced too expensive even for his great wealth, the project was abandoned, but 381 years later,

a far greater canal than he dreamed of will be opened in the very same track which his surveyors followed.

THE FRENCH CANAL

Various canal projects in the meanwhile have been cherished, though the building of the Panama Railroad, 1850-1855, had a deterrent effect on the enterprise; but in May, 1876, the Government of Colombia made a concession for the work to a French Company and operations soon followed. After surveys by Lieutenant Wyse a sea-level canal from Limon Bay to Panama by the pass at Culebra (meaning snake) was decided upon. January 10, 1881, Ferdinand de Lesseps, promoter of the Suez Canal, made the ceremonial beginning at the Pacific entrance, and January 20, 1882, the first excavation was begun near the continental divide where, in the section called the Culebra Cut, work has proceeded ever since except from 1888 to 1891. The French were badly handicapped by disease, Colombian interference, incomplete plans, and insufficient funds, and were injured at home by rumors of sickness, extravagance, etc. In 1887 the sea-level plan was transformed to a lock-level, and February 4, 1889, the company went into the hands of a receiver. Several persons were convicted of fraud including Ferdinand de Lesseps, who, eighty-six years of age, was probably in entire ignorance of the business details. He died soon after.

In 1894 energetic work was recommenced by the new company which continued operations until the Americans took possession, May 4, 1904. \$225,000,000 had been spent upon the work for which the United States paid \$40,000,000. Recently it was estimated to have been worth \$42,799,826. The advantages of the Americans over the French in having political control of the region, modern sanitary methods, better means of excavating, and unlimited money should be considered; and due credit and admiration should be awarded by all to de Lesseps and the Frenchmen who did so much, according to the verdict of praise rendered by our own engineers.

Panama Canal. In June, 1904, Chief Engineer Wallace, Col. W. C. Gorgas, and others sailed to the Isthmus to pursue the great work which had been transferred to the United States, May 4, by the French. Digging in the Culebra Cut was continued, but the chief labor for two years and a half was to remedy the unsanitary conditions, to provide accommodations for the employees, to perfect the organization, to reconstruct and double-track the railroad, and to improve the terminal facilities: necessary preparations for the colossal task. The sanitation of Colon and Panama included repaving,

sewerage systems, and fresh water supply, as a part of the war against yellow and malarial fever. A proportionate sum spent on sanitation in the United States would be \$12,000,000,000 a year, one-third of the entire amount devoted to all government expenses. Since January, 1907, the work has progressed rapidly, so that the canal is expected to be completed and in operation some time before the date of its formal inauguration January 1, 1915.

In spite of being hampered in many ways, much valuable work was accomplished by Chief Engineer John F. Wallace, who resigned after one year, and by his successor, John F. Stevens. He serving until 1907 is said by Col. Goethals to have laid out the transportation scheme in a manner which could not have been equaled by any army engineer. The engineering skill and the great administrative ability of Col. George W. Goethals, Chairman of the Isthmian Canal Commission, Chief Engineer, President of the Railroad, Governor of the Zone, etc., are so well known and already so highly honored as to need no encomiums here. A benevolent despot, able, wise, just, and honest, it is indeed a pleasure in this day and generation to find one as to whose virtues all are agreed, whose undying fame is as yet free from the malice of petty jealousy.

The length of the Canal, from deep water on one side to the same on the other, that is, from the Toro Point breakwater on the Atlantic side to Naos Island on the Pacific side, is about 50 miles,—40 miles from shore to shore. From the Atlantic entrance, by a channel 41 feet deep with a bottom width of 500 feet, it is seven miles to Gatun, two-thirds of which is in Limon Bay, the rest apparently along a fairly broad river. At Gatun, as everybody knows, are the locks, a double series of three, by means of which the ships will be raised 85 feet to the level of Gatun Lake. This, with an area of 164 square miles, is without doubt the largest artificial sheet of water in the world. The lake naturally has a widely varying depth and a highly irregular shape, with large and small arms, promontories, and islands; but vessels may sail at full speed along a channel from 500 to 1000 feet in width for a distance of 24 miles until at Bas Obispo the Culebra Cut is entered. This, about nine miles long, has a bottom width, except

on the curves, of 300 feet only, making a slower rate of speed necessary. At Pedro Miguel the ship will be lowered by one lock to a smaller lake covering 1200 acres, 30 feet below. A mile and a half beyond, at Miraflores, the ship, by means of two locks, will return to sea level, thence sailing on, $8\frac{1}{2}$ miles more, out into the Pacific.

The sail from ocean to ocean will to all be of intense interest, though more highly appreciated by those who visited the region before it was submerged, watched the great shovels cutting away the range of hills which forms the continental divide, and saw the locks in process of formation.

The great Gatun dam seems a wonderful creation, though the only remarkable feature is its size. It should be borne in mind that the extensive surface of the lake among the hills does not cause any greater pressure upon the wall of the dam than if it covered but a single acre; the *depth* of the water being the determining factor, not the extent of surface. The dam is nearly a mile and a half long at the top; half a mile wide at the bottom, 400 feet at the water surface, and 100 at its crest, designed to be 105 feet above sea level and 20 feet above the normal level of the lake: a very wide margin of safety. Of the entire length of the dam only 500 feet, a small fraction, one-fifteenth, of the whole, will be exposed to the maximum water head, 87 feet. The thickness of the dam is greater than was deemed necessary by engineers, with the result that there is no seepage: but it was thought best to satisfy over-apprehensive Congressmen by the employment of excessive caution. The interior of the dam is an impermeable mixture of sand and clay obtained by dredging above and below, placed between two parallel ridges of rock and ordinary material obtained from the steam-shovel excavations. The upstream slope of slight grade is thoroughly riprapped ten feet below and ten above the mean water level. The 21 million cubic yards of material composing the dam, which covers 400 acres, is sufficient to build a wall three feet high and thick nearly halfway around the world.

The Gatun Lake will receive all the waters of the Chagres basin of 1320 square miles and will contain at its ordinary level 206 billion cubic feet of water. An outlet, an obvious necessity, is provided in the spillway, a cut through a hill

of rock nearly in the center of the dam, southwest of the locks. This opening, lined with concrete, is 1200 feet long and 285 feet wide, with the bottom, at the upper end ten feet above sea level, sloping down.

Until the construction of the dam was well advanced the water from the Chagres and its tributaries flowed out through this opening. Then it was closed at the upper or lake end by a dam of concrete 808 feet long in the form of an arc of a circle, its crest 69 feet above the sea. Upon this, 13 concrete piers rise to a height of 115.5 feet, with steel gates by which the water level of the lake will be regulated.

The immense double locks deserve more than a cursory glance. Similar in construction and dimensions, each has a usable length of 1000 feet and a width of 110 feet. The chambers have floors and walls of concrete with mitering gates at each end. The walls, perpendicular on the inside, are 45 to 50 feet thick near the bottom, but the outer walls narrow from a point 24 feet above the floor to a thickness of 8 feet at the top. The middle wall separating the double locks is 60 feet thick and 81 high, with both faces vertical; but in the upper part it is not solid. A tunnel in the wall has three divisions, the lowest for drainage, the middle for electric wires to operate the gate and valve machinery, the highest as a passage way for the operators. An enormous amount of concrete has been employed for the locks, four million or more cubic yards, with as many barrels of cement, enough to make a sidewalk 9 feet wide and 6 inches thick more than twice around the world.

Matching the walls are immense steel gates, 7 feet thick, 65 feet wide, and from 47 to 82 feet high, with a weight of from 390 to 730 tons each. At the entrance to the locks are double gates, also at the lower end of the upper lock in each flight, in case of ramming by a ship accidentally breaking through the fender chain; for there are 24 chains in addition to the gates, to prevent the gates being rammed by a ship under its own steam or having escaped from the towing locomotive. The chains will be lowered into a groove to allow the ships to pass.

Ships will not be permitted to enter the locks under their own steam, but will be towed through by electric locomotives,

usually four to each vessel, two ahead and two astern, the latter to keep the vessel in the middle, and in the right place. The gates and valves are also operated by electricity, with power obtained through water turbines from the head created by Gatun Lake. The locks will be filled and emptied by a system of culverts, one of which, about the size of the Hudson River tunnels of the Pennsylvania Railroad, 18 feet in diameter, extends along the side and middle walls, with smaller branches under the floor of the locks. The water enters and leaves by holes in the floor. The culverts are so arranged as to economize water by passing it from one twin lock to the other. To save both time and water each lock chamber has a single gate near the middle dividing it into two parts, only one of which will be used for vessels less than 600 feet long. To fill and empty a lock will require about 15 minutes: to pass through the three at Gatun, about an hour and a half, and as much more to go down the locks on the Pacific side. The entire passage through the Canal will occupy 10 or 12 hours according to the speed of the ship, in the narrower parts all being obliged to go slowly. While it is hoped that the first steamer will pass through the Canal in December, 1913, if not earlier, there is no expectation of its being open for general traffic before the summer of 1914.

Colon. Passengers arriving on a Panama Railroad Steamship at *Christobal*, practically a part of Colon, may find waiting on the dock a special train to carry them across the Isthmus. The tourist, en route to a Pacific port, with his heavy baggage checked through, may let that go on to Balboa, the place of embarkation on the other side, and himself remain with hand luggage to look about Colon. Tourists on other steamers land at a Colon dock, from which it is a five minutes' walk to the railway station. Men and boys are about, to assist with hand baggage. All that is checked through *should* be transported to Balboa without personal care; but the cautious traveler will have an eye upon it to see that it goes to the station here, and aboard the proper steamer on the Pacific side.

HOTELS. Washington, E. P. Rooms \$3.00 per day and up, December 1 to June 1. June to December \$2.00. Meals \$1.00 each or à la carte. Imperial Hotel, Park Hotel.

Carriage Fare, 10 cents for one, 20 cents for two, 25 cents for three, 30 cents for four. By the hour 75 cents for one, \$1.00 for two, and so on.

Regular trains for Panama (June, 1913) at 5:10 and 10:30 a. m., and 4:25 p. m.; time two and one-half hours. Inquire as to special sight-seeing trains.

Landing early in the morning one may have sufficient time to look about Colon and Christobal before taking the afternoon train for Panama. Those planning a longer stay, to enjoy some of the excursions available, will drive at once to the new Washington Hotel on Colon Beach, near the site of the old house of that name, which, giving way to its stately successor, now stands in the rear of Christ Church and there fulfills its original purpose to supply lodging for the railway employees. The new hotel, built of hollow tiles and reinforced concrete in a modification of the Spanish Mission style, is quite up to date with baths, electric lights, lounging rooms, etc., broad verandas on the side towards the sea, and a pretty garden between the house and sea wall. A swimming pool has been constructed near by, 100x125 feet, from 3 to 9 feet deep, open on the sea side, where a baffle wall protects it from rough water. In 1903 I looked at the water with longing eyes, but the numerous sharks deter most persons from venturing into the ocean. The hotel with some rooms with bath, and others without, accommodates 175 persons. Like the Tivoli it has no bar, and since April 24, 1913, there are no saloons in the Zone outside of the cities, Colon and Panama, which except for sanitary regulations are under Panamanian control. The hotel enjoys a breeze all the year around and is *said* to be as cool as Bar Harbor in July, and no warmer in winter; but it did not seem that way to me when I spent a few days in Colon in 1903, the excessive humidity rendering the heat oppressive.

In the center of the garden in front of the hotel is a rather ugly monument, a red granite shaft on a triangular base, bearing busts of John L. Stephens, Henry Chauncey, and of William H. Aspinwall, after whom Americans called the town for some years. To these three men, in December, 1848, a concession was granted by Colombia to build a railroad across the isthmus. The discovery of gold in California made it possible to raise money for the enterprise. Work began in

1850, and the first train crossed the continent January 28, 1855. The passenger and the freight trade have been both heavy and expensive, so that from 1852 to the present time annual dividends of from 3 to 61 per cent have been paid. Most of the traffic to California and Oregon was diverted on the completion in 1869 of the transcontinental railway, but good dividends continued. In 1881 the French Canal Company bought most of the shares, as the road was an obvious necessity to their work; it therefore came into possession of the United States Government, May 4, 1904, when the purchase of the French rights, work, and equipment was consummated.

The city of Colon, which the Colombian Government very properly insisted upon calling after Columbus, is on the Island of Manzanillo (formerly separated by a narrow strait from the main land), a coral reef with a mangrove swamp at the back. Here in 1850 some shanties and stores were built by the pioneers of the railroad. The village grew and prospered in spite of the swampy location, which was improved by the deposits of rock and earth made by the French on the part now known as Christobal for the homes of the employees. In 1904 there were 10,000 people in the town, 9000 living in shanties on stilts in the terrible section back of Front street. Now in Christobal-Colon there are 20,000 people, and the place is drained and healthful.

Just east of the Washington Hotel is the gray stone building, modified Gothic, of Christ Episcopal Church, dedicated in 1865. Built by contributions from the Panama Railroad Company and various missionary societies, it was at first American, after 1883 Anglican, and in 1907 again American Episcopal. Whites and blacks here worship together, with a majority of negroes.

Half a mile farther on is the fine Colon hospital with 525 beds, of course a Commission affair. Built right over the water on piles a few feet high, one is almost tempted to be sick to be housed in so attractive a place. Beyond is the quarantine station where persons coming from plague or fever ports are detained six or seven days.

The numerous negroes from Jamaica and Martinique will interest many, their dwellings on the back streets, the drainage

ditch, and Front street lined with stores, where curios of a sort could formerly be purchased better than in Panama,—bags or caps of cocoanut skins, heads carved from cocoanuts, and carved gourds, large and small, the latter used as drinking cups.

In Christobal are dwellings of the Canal employees; a large building occupied by the Commissary Department contains a cold storage plant, a bakery, and a laundry, which serve all the employees of the canal, the railroad, and the U. S. Government on the Isthmus:—these with their families numbering at times 60,000. Also there is a Commission Hotel with meals at 30 cents for employees, 50 cents for transients, providing better fare than can be procured in most parts of the United States for the price to employees; and a Y. M. C. A. building which supplies a reading room, opportunity for games and for social diversions including dances, lectures, and other entertainments. There are five other similar structures along the line.

At the end of the Point are two houses constructed for Ferdinand de Lesseps and his son, now moved closer together and devoted to offices of the Commissary and Health Departments. Beyond is the statue of the great Discoverer: the monument, cast at Turin, a replica of one in Lima, presented by Empress Eugénie to the Republic of Colombia to be erected at Colon. Columbus, of noble countenance, is represented in attitude of explanation to an Indian maiden personifying America, whose face expresses wonder and alarm.

Porto Bello. With time to spare an excursion may be made to the beautiful harbor of Porto Bello, 18 miles northeast of Colon, where the Commission has been operating, in a great rock quarry, one of the largest stone crushers in the world. Millions of cubic yards of rock have been taken from here, a smaller size for the concrete of the Gatun locks and spillway, a larger size for the Colon breakwater. Porto Bello and Nombre de Dios were the two safe harbors found by the Spaniards on this coast. The former has been a Spanish town since 1597. With a fine location the town is considered unhealthy, having an extraordinary amount of rain, 237 inches in 1909. A tug leaves Christobal wharf every morning returning at night. One has two hours or more to view the

American settlement of 1000 people at the stone quarries and to cross the bay to the old village to see the finest ruins on the Isthmus: an old customs house, old bridges, the remains of Fort San Jerome, and the old plaza. There is a population of over 2000, with a church and stores.

Some miles beyond Porto Bello begins the large section of country inhabited by the *San Blas Indians*, who have been smart and sensible enough to keep the white man out of their territory, thus preserving their independence to the present day. They come to Colon to trade, but seldom allow a stranger to remain over night in their territory.

San Lorenzo Fort. Another excursion of interest is to San Lorenzo Fort, at the mouth of the Chagres River, either by sea in a motor boat, or better, in a canoe down the river from Gatun, a sail of ten miles, during which one has a glimpse of the real tropical jungle; the sea route affords a better view of the old fort. The remains are very complete, an outer wall, and a castle to be entered by a drawbridge. There are strong rooms, galleries for prison cells, manacles, etc., seeing which the tourist is apt to be more contented with his own lot. At the foot of the hill is the little village of Chagres.

In front of Christobal a construction of five piers is being made enclosing ten docks capable of berthing ships 1000 feet long, these being the Atlantic terminal docks for the canal. Across the bay is *Toro Point*. From this headland a breakwater has been constructed to protect the canal entrance and Limon Bay from the violent northers which occasionally visit this coast. It will also reduce the amount of silt to be washed into the dredged canal. From Toro Point the breakwater extends northeast for a distance of over two miles. The bottom width varies with the depth of the water; at the top it is 15 feet wide and 10 feet above mean sea level. A double-track trestle was first constructed, from which carloads of rock were dumped into the sea. The cost is about \$5,500,000. It has recently been decided to construct an additional though smaller breakwater on the Colon side, extending west, some distance north of Christobal Point. Fortifications for the defense of the canal are being raised, both at Toro Point and on the east side at Margarita Island, one mile north of Manzanillo.

CHAPTER IV

COLON TO PANAMA—PANAMA CITY

Four daily trains in about 2 hours at 3.00, 6.00 and 10.40 a. m. and 4.00 p. m. Special train for sight-seers, round trip fare \$4.00, from Colon at 8 a. m., with barge service on lake, \$1.50 extra.

Guides for tourist parties to inspect Canal, \$7.50 per day, on application to Railway Ticket Agents, Colon or Panama.

WHILE the sail through the great canal will be an extraordinary delight, the railroad ride will also afford much pleasure. On leaving Colon the line passes various docks, the Government printing plant, the marine shop and dry dock at Mount Hope, and the main storehouse of supplies for canal and railroad. On the east side of the railroad, opposite the warehouse, is Mount Hope Cemetery, where many French and others are buried, on a knoll which for a time was called Monkey Hill on account of the many monkeys there. These creatures are found in the woods all over the Isthmus. Stone piers which may be seen on the east beyond Mindi were erected by the French for a viaduct with the design of relocating the railroad. This, obviously necessary for the Americans, has been accomplished at a cost of nearly \$9,000,000. In the swamp lands along here much papyrus is growing.

New Gatun. From Colon to Gatun a distance of 7 miles the track rises 95 feet. New Gatun, on the hill, is a village but a few years old, the site of the ancient town now being covered by the dam. In 1904 Gatun was a busy place on the Chagres River, where sometimes 100 dugouts loaded with bananas would tie at the bank, and seven or eight car loads a week would be shipped. In former days the railroad followed up the Chagres Valley, but now it is obliged to turn east to make a detour around the lake. It is desirable to alight here to examine the locks and if possible the spillway. Along the

edge of the lock walls may be seen the cog rail for the towing locomotives, and farther back the return track without center cog. Tall concrete columns along the top of the walls are the standards for electric lights to illuminate the locks. Tall towers, apparently light houses, are range lights on the center lines of the straight stretches of the canal, so that a vessel lining up with the tower would know it was on the center line of the canal. From the building on Gatun hill containing the office of the Division Engineer may be had the best view of the canal obtainable from any one point. Northward are the waters of Limon Bay; and the masts of shipping at Colon harbor are visible. Close at hand are the locks and dam and a broad stretch of the lake.

Leaving Gatun the new road turns east along Gatun ridge, then south with pretty glimpses of the jungle, crossing the Gatun Valley to Monte Lirio. From this point it skirts the east shore of the lake to Bas Obispo at the beginning of the Culebra Cut. Several immense embankments were necessary to cross the Gatun Valley section above the surface of the lake, and others were made for dumping the spoil from Culebra Cut near its north end. Half a mile beyond Monte Lirio the railroad crosses the Gatun River by a steel girder bridge 318 feet long, built in three spans, one of which may be lifted to permit access by boat to the upper arm of the lake. Another steel girder bridge, one-quarter of a mile long, crosses the Chagres River at Gamboa, with the channel span a 200-foot truss, the other fourteen, plate girder spans, each 80 feet long. From this bridge, at the north end of which a new town-site has been laid out, a glimpse of the northern end of Culebra Cut may be had. It was originally expected to carry the road through the Cut, 10 feet above the water level, but the slides making this impracticable, the relocation has been made by cutting through a ridge of solid rock and working around east of Gold Hill, passing Culebra at a distance of 2 miles. Then the track runs down the Pedro Miguel Valley to Pedro Miguel Station, where it is within 300 feet of the locks. The highest elevation of the track is 270 feet above the sea about opposite Las Cascadas. The Continental Divide is crossed 240 feet above the sea in about the same line as Culebra.

Journeying by the new road from Gatun, the old traveler or

resident will miss some familiar names, the bearers of which, if not concealed under water, are now remote and vanishing. Lion and Tiger Hills were small hamlets, but Bohio was quite a place, where the French had a machine shop. It was once considered as a possible site for the locks and dam. Frijoles (beans) and Tabernilla have been places of some importance and Gorgona of more, because here were the American machine shops, now removed to Balboa. The place with the peculiar name Matachin, which everybody remembered, will not be covered over with water, but like others farther on will relapse into a small hamlet. The prevalent notion that this name was derived from *matar*, to kill, and *Chino*, and was applied on account of the wholesale deaths of Chinese is incorrect. It is the Spanish word meaning a dance by grotesque figures.

Bas Obispo beyond Gamboa is one of the old places still visible, at the north end of the Culebra Cut. Near by, December 12, 1908, occurred the greatest accident in the construction of the Canal when 44,000 pounds of 45 per cent dynamite which had been packed into fifty-three holes were set off by the explosion of one, as the last hole was being tamped. As the hour was 11.10 many men were passing home to lunch. The hillside, falling into the Cut, as had been planned for a later hour, buried several men, and others were struck by flying rock. In all twenty-six were killed and a dozen permanently maimed. Near Bas Obispo is Camp Elliott, where a battalion of marines has long been stationed.

Empire. Las Cascadas, where once a stream tumbled down a precipice 40 feet towards the Chagres, formerly came next, then Empire, one of the largest of the Canal villages. Here the French began excavations in the Cut, as previously mentioned, January 20, 1882, before a large assemblage of officials of the Canal Company and of Panama. The work was blessed by the Bishop and the too common champagne celebrated the occasion.

Culebra was the real capital of the Zone after John F. Stevens in 1906 moved his quarters there from Ancon. Here has been the home and office of Col. Goethals, the head of everything, and of other prominent officials. In 1908 Culebra had a population of 5516, but is now much smaller. The side of the hill towards the Cut has been gradually slipping away,

taking a part of the village, but so slowly that the houses were first removed to the rear slopes.

The average depth of the Cut through its nine miles of length is 120 feet. The heaviest point is near Culebra village between Gold Hill on the east side and Contractors' Hill on the west, where the depth averages 375 feet. The summit of Gold Hill is 660 feet above the sea, of Contractors' Hill, 410 feet. Beyond Gold Hill is the troublesome Cucuracha slide, though the largest is the one at the Culebra village on the west. One slide here involved 1,550,000 cubic yards. At this point the Cut is about 2000 feet across. The dwellings of the employees here, as at Christobal and all along the line, look very pretty and comfortable with their screened verandas. Market facilities have been good with prices generally lower than at home for meat and other things brought in cold storage from the States. The climate is not objectionable to the majority, and many will be grieved, when, the Canal being finished and only a select few remaining for its service, they shall be obliged to return home again. Some, no doubt, being now weaned from excessive affection for one particular spot, will go on to other parts of Spanish America. There, intelligent men of the right spirit, who have saved a portion of their earnings, will find agreeable opportunities for work and for investments of various kinds.

Beyond Pedro Miguel is the Miraflores Lake and the two Miraflores locks by which the ships reach sea level again. After passing through a concrete lined tunnel 736 feet long, Ancon Hill, overlooking the Pacific entrance to the Canal, is straight ahead. One more station, Corozal, headquarters of the Pacific Division, and the city of Panama is reached.

PANAMA CITY

HOTELS. The Tivoli, \$5.50 and up a day, American plan; the Central, \$3.00 a day, American plan; the International, Metropole, and several others, smaller and less expensive, but some of them neat and respectable.

Carriage Fare, 10 cents, U. S. currency, for one person, 20 cents for two, etc., in Panama City, or 20 cents and 40 cents silver, Panama money. Panama to Balboa docks, 50 cents U. S. currency.

Automobile Tariff, first hour, for cars seating five, six, or seven persons, \$5.00, \$6.00, or \$7.00; second hour \$1.00 less. Local fares

about the city, 50 cents for each person. To Balboa Docks and return, \$3.50, five-seat car; \$5.00, seven-seat car. To Old Panama and return, \$5.00, or \$7.00, if within one hour; if more, on hourly basis.

Electric Cars, fare five cents, run every ten minutes from Hotel Tivoli past the railway station down Avenue Central to the National Palace near the sea wall; also beyond the Tivoli to the Catholic Chapel on the Ancon Hospital road. Of two other lines, one runs from Santa Ana Park by C, 16th, and B streets, and so on to Balboa; another branching from Central avenue at 13th street and following North avenue goes out the Sabanas road.

The Republic of Panama, proclaimed Nov. 3, 1903, by treaty of Feb. 26, 1904, came under the protection of the United States, receiving \$10,000,000 cash for the sovereignty of the Canal Zone and after 1913 a yearly rental of \$250,000. The form of government of the Republic is similar to that of the United States. The country is 340 miles long from east to west, from the Atrato River on the Colombia side to Costa Rica on the west. From north to south its widest point is 120 miles in the province of Veraguas, and the narrowest less than 40 in Darien. There are mountains 7000 feet high in Darien and 11,000 feet in Chiriqui; the lowest pass, 312 feet, is that used by the Canal and Railroad. The population, outside the Zone about 340,000, includes 36,000 Indians, and a very large proportion of negroes and mixed races. The country has excellent possibilities for agriculture and cattle raising, with smaller ones for minerals.

Panama. The new city of Panama, founded January 21, 1673, was soon protected by a sea-wall, still standing, and on the single land side by a wall, and a deep moat crossed by a drawbridge. To make it proof against further raids two forts were erected on the land side and one by the sea. The residences built of wood suffered from various fires so that few old buildings remain, yet the masonry structures have the appearance of age. One hundred and twenty years ago the city had 7857 inhabitants, double that in 1870, and in 1911, 37,505.

Hotel Tivoli. Arriving at Panama, almost every one who can afford it will go to the Hotel Tivoli, near the station, delightfully situated at the foot of Ancon Hill, on the farther side of a small park called the Plaza de Lesseps. It is in-

tended some day to erect in the center of the plaza a statue to the hero of the Suez Canal, initiator of the great work at Panama. On a knoll, overlooking the city and part of the bay, the hotel has many rooms opening on the broad verandas which afford charming prospects. The nights are comfortably cool, and the table affords good American fare. The hotel was erected by the Government especially to accommodate Canal employees on their arrival, and persons whose business with the administration caused them to come to the Isthmus. Also it was designed to afford recreation to employees on the line desirous of an occasional trip to the city. With this end in view a large dance hall was provided about 80x40 feet, where the Tivoli Club, organized among the employees, has given dances two Saturday evenings each month. The hotel, opened Jan. 1, 1907, has 220 guest rooms, and a dining-room seating 700. The building, 314 feet long with wings 156 feet deep, has a court in front 91 feet in depth with a carriage road and garden. Of late on account of increased travel the hotel has been enlarged and is much used by tourists. The prices, \$5.50 a day and up, will seem reasonable enough to patrons of the large New York hotels.

The Hotel Central may be preferred by some on account of the lower prices, \$3.00 and up, or because it is in the center of things on the principal plaza of Panama (now called the Independencia), opposite the cathedral; its location and its clientele afford an opportunity to see more of Spanish American life. The building is four stories high, in Spanish style around a central court or patio. Built in 1880 it has recently been renewed, and the rooms are large and airy. The table formerly left something to be desired, but has very likely improved with the competition. Once it was the *only* place where anybody could go.

The International Hotel is most convenient to the railway station on the Railway Plaza; a large fireproof building in Spanish Mission style, completed in 1912, and affording all modern conveniences. The smaller hotels on the Avenida Central may be patronized by those to whom the saving of a few dollars is important. The *Hotel Metropole* is pleasantly situated on the Santa Ana Plaza.

A new and modern hotel, accommodating 500 persons, built

by British capital on Chiriqui Point overlooking the bay, is expected to be ready for guests in November, 1914.

Sight-seeing may begin from the Tivoli or International with a walk or ride down the Avenida Central, which goes first in a rather southerly direction, but in town when crossing the plaza about east and west. The northern part of the town is rather new, belonging to the Canal period, French and American. On the right at some little distance a three-story white concrete building, very ornate, with broad portico, is the club house of the Spanish Benevolent Society. Next door is the American Consulate. Two blocks farther is the Plaza Santa Ana, with trees, plants, and walks, where on Thursday nights there is a band concert and hundreds of people promenading. Besides the Church, there are saloons, a Variety Theater with roof garden, promenade balcony, and fine interior decorations, erected 1911-12, and on the west side the Metropole Hotel. On the road, one block south of the plaza, leading west to Balboa is the Santo Tomas Hospital, with 350 beds, under the direction of an American doctor with good nurses and physicians, maintained by the Panama Government. The three cemeteries are beyond, one each for Chinese, Hebrews, and Christians. Tragic tales are told of the yellow fever days, and space for burial is still leased.

Three blocks from the Plaza on the Central avenue is the Church of La Merced. Diagonally across from it is a piece of the old wall formerly extending from tidewater on one side to the other. One should climb the steps to get an idea of the walls, the cost of which caused wonder to the King of Spain. This was one of the bastions commanding the drawbridge and the *sabanas* or plains to the north. Here the youth now play tennis, and a circus encamps once a year. The area is at least 1500 square feet, and there is a drop of from 30 to 35 feet to the level outside. A parapet 3 feet high still shows the embrasures for the brass cannon. The old wall extending to the south had rock faces with earth between.

Beyond this wall is the real city, mostly of natives, with its own peculiar spirit and fascination. They always come back, it is said, when people go away. Here in the narrow

streets, plazas, churches, even stores, and on the old sea wall, a spell is woven over those who linger, which has alluring power. The *Plaza Independencia*, three blocks from the wall, is the heart of the city, a charming place, with the Cathedral on the west, the Central Hotel east, the Bishop's Palace north, and the Municipal Building and the French Administration Building on the south. The last, four stories high, was built in 1875 as a hotel, but leased to the French and used for offices. The Americans took possession of it May 4, 1904, but finding it to be infested with the *stegomia* mosquitoes during the yellow fever epidemic in 1905, it was abandoned by them in 1906 when the Chief Engineer moved to Culebra. It is now occupied by the health and municipal bureaus of Panama and by their printing office.

The new *Municipal Building*, on the site of the old *cabildo*, council chamber, in which independence was declared in 1821, was completed in 1910 and is called the handsomest building in the city. Here are various offices, the Columbus Library with valuable historical works, a marble *bacchante* in the corridor, and a front door of a dozen varieties of native hard woods.

The *Bishop's Palace* erected 1880, besides his residence, offices, and a boys' school, has in one corner the office of the Panama Lottery. Though gambling is prohibited by the Panama Constitution, the lease of the company is good till 1918. Every Sunday morning drawings are made for prizes ranging from \$1.00 to \$3500, taken from 10,000 tickets. It is said that most of the money comes from the Canal workers. The offices of several of the steamship companies are on the Plaza, but that of the Peruvian Line is on 11th street near Central avenue.

Continuing on the Central avenue, passing on the right the French consulate and the American Legation, one reaches the *National Palace* or Government Building on the left, occupying a whole square, with a central patio. The Assembly Halls and offices are on the south side, the *National Theatre* on the north and various Government offices on the sides. Begun in 1905 it was finished in 1908. It is of the modified Italian renaissance style and is said to be fireproof. The handsome theater seats 1000 people. There is a week or two of opera

and of theater every year. Other entertainments are occasionally held, and public meetings of a non-political nature.

The *Plaza Bolívar*, formerly San Francisco, is at the southeast corner of the building, with the San Francisco Church and Franciscan convent on the east side, the latter in ruins, destroyed by fire in 1756; the former, also burned, was restored 1785-1790. The church is a basilica with a nave and two aisles, the arches supported by square masonry pillars, and with transept and apse. The high altar is wood painted to imitate marble. A picture in a shrine at the left of the entrance has a very definite representation of purgatory, with a view of heavenly regions above.

The ruins of the old convent still show a fine row of arches. Within are wooden buildings now used as schools.

From the Central avenue going along the water front, one will pass a Methodist Episcopal Church, parsonage, and school, buildings of concrete erected in 1908. At the sea front is the south bastion called *The Sea Wall*. Under the arches are many dungeons once filthy, where thousands of criminals and political suspects suffered and died. These are used no longer, but the Chiriqui prison, suitably provided and clean, is here located, partly in the large barrack building formerly occupied by the garrison of soldiers. In the late afternoon or early evening one should visit this interesting spot. Close by is the new home of the *University Club* where some say the best meals in Panama are served and the best collection of English books and periodicals is found. The library and reading room with hardwood floor are sometimes cleared for dancing. The membership of two hundred includes one hundred twenty-five American employees and seventy-five residents of Panama. Organized in 1906 for college men, the restriction was soon abandoned.

Two blocks from the Plaza Bolívar, keeping to the sea front, is the home of the Union Club, a large white building from the roof of which is a fine view of Panama Bay. A swimming tank refilled at every tide is among its luxuries.

On the water front near this Club, at the foot of 5th street which passes in front of the Hotel Central, is the *Marine Building* where passengers go aboard small boats to be rowed out to ships engaged in the coasting trade. Diagonally across

the street is the *Presidencia*, a two-story building of Spanish Mission style where the President of the Republic lives and has his executive offices.

Two blocks along the front from the *Presidencia* there is a steep incline where the old wall passed to the sea. On the beach below, a market was established in 1877, now in a large open building, where not only vegetables, fruits, meat, and fish are sold, but lace and other commodities. Close by, boats at high tide run up on the beach, saving expense of lighterage. A visit to the market early in the morning is well worth while, as the assemblage of people and of commodities, many of strange appearance, make this the most picturesque place in Panama. On the way to the plaza one may pass various shops, several Chinese, where bargaining is possible, though most of the other stores have one price. Woolens, silk, lace, and some other things are cheaper than in the United States, and odd bits may be picked up by a connoisseur. Panama hats are found cheaper than in the United States, but may be purchased to better advantage in Ecuador and Peru. A hammock, a kodak, films, anything forgotten or newly thought of may here be supplied. But if films are purchased, be sure that they are dated nearly a year ahead and are in sealed tin boxes.

The churches of Panama are not especially fine, but a few should be visited. It would be needless to say that due respect to the House of God should be shown by the removal of the hat, and by courteous behavior, but for the astonishing ill manners and rudeness displayed by some American boors which have tended to make us unpopular with most Latin Americans. If we are really so superior as some of us fancy, it would be well to exhibit this by our good breeding. To avoid shocking the prejudices of others, and in some cases to do *better* than we would be done by will increase the pleasure of a trip and pave the way for business advantage.

The *Cathedral*, though first of the churches designed, was delayed in construction. A negro, Luna Victoria, becoming Bishop in 1751, urged its completion, himself making liberal contributions so that it was finished in 1760. The architecture is of Moorish type with Spanish and American modifica-

tions; the style of two towers is used in many Spanish American churches. The cathedral has a nave and four aisles, an apse containing the high altar of wood richly ornamented, with two side altars and the episcopal throne. An old painting representing the miracle of the Rosary is said to be a Murillo.

The Church of San Felipe Neri, with a tablet bearing the words Neri Ao 1688, on the corner of Avenue B and 4th street, is said to be the oldest and perhaps the prettiest of the Panama churches. It is less gaudy or tawdry than some of the others. An adjoining courtyard with a garden is surrounded by houses of Sisters of Charity. At the corner of Avenue A and 3rd street are the ruins of the old *Dominican Church* with a little statue still standing over the entrance. The woodwork was burned in the fire of 1756 and it was never rebuilt. One of the arches was shattered in the earthquake of 1882. A brick arch near the entrance, 50 feet wide with but 10 feet between the heights of spring and arch, is unusually flat. There are others, in the San Francisco and Jesuit churches, of almost the same style.

A church and convent school erected by the Jesuits 1749-1751 was of little service, as the Order was expelled in 1767. In 1781 the wood of the structure was burned, but the ruins are still of interest. The churches of La Merced and Santa Ana contain little to invite attention, unless it be the effigy of the gentleman who provided the funds for the reconstruction in 1760 of the latter church and who was thereafter called the Count of Santa Ana.

A visit to *Ancon* must certainly not be neglected. On its edge is the *Panama National Institute* opened in 1911, consisting of seven buildings around a patio, including a gymnasium. This is to be the head of the educational system, but at present is occupied with primary and secondary instruction.

Ancon Hill is especially noted for the hospital, the buildings of which were erected by the French soon after 1881. When Col. Gorgas and his assistants arrived in 1904 they were pleased to find them in so excellent a condition with French Sisters of St. Vincent still in charge. Many additions and improvements were made, but most of the twenty-three buildings

are still in use. With crowding, 2000 patients may be accommodated, but for the last five years the percentage of health has been remarkably good. Thanks to the skill and efficiency of Col. W. C. Gorgas, of the Regular Army, as Health Officer, and to his corps of able assistants, yellow fever was practically stamped out in 1906 and malaria diminished, by the destruction of the mosquitoes, screening, etc. Swamps were filled in, and the cities of Panama and Colon were to some extent made over. Every street in Panama is now paved with brick or macadam, all are well drained and provided with sewers, and the dirtiest slum of the city is cleaner than many middle class streets in most American cities, not to mention New York. A good water supply is provided, and all these improvements are being paid for by Panama from the water rates. The *Administration Building* on one of the knolls at the foot of the hill should be noted. There are located the offices of the Sanitation Department, the Civil Administration, and the Commission Secretary. The *Avenue of Royal Palms* leading up from the entrance to the hospital grounds will be admired by every one, and those of botanical tastes will enjoy spending a considerable time in the garden which was begun by the Mother Superior, Sister Marie Rouleau, and which has recently been catalogued by Col. Mason. It contains a fine collection of the plant life of the Isthmus, trees, fruits, nuts, shrubs, and flowers. Persons not botanists will find pleasure in examining many plants with familiar names, some never seen before, others only in a hot house. The energetic individual will enjoy climbing to the top of the hill which, 664 feet above the sea, affords a view of bay, islands, city, and green hills, beautiful enough to reward even the slothful: but near sunrise or sunset are the only suitable hours for a climb in this temperature.

Old Panama. An excursion to Old Panama should be taken if possible. In 1911 a road was constructed by the Panama Government from the highway traversing Las Sabanas, to the old city. Electric cars may be available for the excursion, as well as carriage and automobile. Also one may go by launch or horseback. Paths lead to the chief points of interest,—the old bridges across the estuary that extended on two sides

of the city, the tower seen from afar and the church of St. Anastasius, the wells, and the walls and foundations of public buildings. On the sea side is a hole in the wall where still may be seen the old paved road leading into the water. At high tide ships could come up to the city gate.

CHAPTER V

STEAMSHIP LINES ON THE WEST COAST

SIDE TRIP TO ECUADOR

Panama to Callao and Valparaiso—The Pacific Steam Navigation Company; and Compañía Sud-Americana de Vapores—each with sailings alternate Mondays; the Compañía Peruana de Vapores—sailings alternate Mondays to Valparaiso, alternate Sundays as far as Mollendo.

Panama to Guayaquil—The Pacific Steam Navigation Company—two steamers weekly; one express direct, one accommodation, calling at Colombia and Ecuador ports. The Compañía Peruana de Vapores—fortnightly, on Sundays, direct.

Guayaquil to Callao—The Pacific Steam Navigation Company; the Compañía Sud-Americana de Vapores—alternate sailings weekly on Wednesdays; the Compañía Peruana de Vapores—fortnightly sailings on Wednesdays.

THE traveler going southward from Panama to Callao or beyond has at present a choice of ships on three different lines: Peruvian, English, and Chilian; the second, often called the P. S. N., now a branch of the Royal Mail; the third, that of the Compañía Sud-Americana de Vapores. The through ticket purchased in New York to a South American port, or a roundtrip ticket, good on any of these lines, *will not be accepted* on the steamers for transportation. Being certificates merely, they must be exchanged for tickets in Panama at the office of that steamship line by which one has decided to sail. The cabin may there be selected and assigned.

As the boats vary in size and speed, individually, rather than according to the line, travelers are apt to go by the first steamer sailing after they are ready to depart; yet some have a preference and arrange their plans accordingly. Peruvians and Chilians are likely to patronize their respective lines; some English speaking people prefer the P. S. N. Others have

a favorite ship or captain. Since the chief officers on most of the ships of all the lines are British, while the subordinates, stewards, cabin boys, etc., are Spanish Americans, the difference is not striking, although the P. S. N. boats seem a trifle more English. On these the menu is in English and Spanish both, on the Chilian Line in Spanish only. The boats of the Peruvian Line, the newest and the largest, are preferred by some Americans who have tried all of the lines. The various steamers are lighted by electricity, the Peruvian have also electric fans, for the use of which a charge of \$1.00 is made for the trip. Deck chairs cost \$1.25. Most of the ships on all lines have on the upper deck a handsome salon with piano, card tables, sofas, perhaps a fairly stocked book-case, a spacious well-furnished dining-room, and a large comfortable smoking room, besides considerable space for deck golf and other sports. The Peruvian steamers have on this deck four cabins at a price ten per cent higher than those below. The cabins in general are on the second deck, all opening on an outside passage with door and window, each furnished with blinds. On my first voyage I provided myself with mosquito netting, as advised, especially for the trip to Guayaquil; but never had occasion to use it. In the rainy season, from December to June, one would be indispensable for the tourist visiting Ecuador, but is superfluous at any time to one going directly to Peru. Meal hours vary slightly on the different steamers, but all serve coffee with toast or rolls in cabin or dining-room from 6.30 to 8.30 a. m. At last accounts condensed milk, unfortunately, was the accompaniment. Persons who object to this will be happier if they provide themselves in New York with a few five cent cans of the evaporated. On the East Coast the ships appear to have regular milk, but as late as 1911 I saw none on the West. The hours of the meals are at the pleasure of the captains; on the English boats generally, breakfast is at nine or half past, on the others it may be at ten or eleven: luncheon is served at 1, 1.30, or 2 p. m., dinner at 6, 6.30, or 7. Some ships have afternoon tea at four, others have tea at 8.30 or 9 p. m. Breakfast, in Spanish, *almuerzo*, begins with *cazuela*, a kind of soup, which is followed by fish, entrées, eggs, beefsteak, etc.: at luncheon there are cold dishes only, meats and salad, except for hot potatoes,

tea, and coffee. The dinner resembles breakfast, but has a different kind of soup, while roasts and sweets are served at this meal only. As many of the ships are unprovided with cold storage, the meat, eaten the day after it is killed, is often tough. For this reason the boiled meats and the South American dishes generally are apt to be better than the roasts; that is, if you like them. It is well to have a try, for many are really good. Of fruit, oranges and bananas are always in evidence, sometimes melons, and paltas (alligator pears or aguacate), which as salad are very fine.

Balboa, the place of embarkation, formerly called La Boca, is ten or fifteen minutes by rail from the Panama station. Its present name, in honor of the discoverer of the Pacific, dates from April 30, 1909, when, adopting the suggestion of Hon. Alfonso Pezet, then Peruvian Minister to Panama, Colonel Goethals issued a circular with the mandate that La Boca should in future be known as Balboa.

Before embarking for the south, it is important to look up one's baggage and see that it is put on board the ship by which one is about to sail. Baggage which is checked through to Callao or elsewhere will probably be brought over to this port and remain in the baggage room until it is pointed out by the owner and the ship is designated on which he will sail. This is an absolute necessity. Otherwise it might be sent on an earlier or a different steamer, when, with no one to look after it and pay for its transport to land, it might sail up and down the coast a year or two, or until the ship people decided to dump it in the ocean. Hence, *always, look after your baggage*, throughout the entire trip. Failing in care, you are likely never to see it more. Ample time should be allowed for the purpose, and no harm will be done if, at the Panama station, you investigate to see if by chance your baggage has been left there instead of at the Balboa dock.

A matter by no means to be overlooked before embarkation is the procuring of *Peruvian money*, silver and gold for use on the steamer and in landing. English sovereigns and half sovereigns, equal to 10 and 5 *soles*, will do as well as Peruvian coins of the same value; but one should have silver coins as well, a *sol* equaling 48½ cents. Exchange will be made at the banks or by money changers in Panama.

Tourists will generally embark at Balboa for Peru; but Colombia and Ecuador may be included in the tour if desired. Two steamers sail for Guayaquil, one express, making no calls en route, the other, *caletero*, or as we should term it, if a train, accommodation, calling at various ports in Colombia and Ecuador. *Buenaventura* in Colombia is the port for its capital, Bogotá, a city charmingly situated, with a delightful climate, containing many cultivated people and luxurious homes, yet by any route a tedious journey from the sea. From Cali which the railroad nearly reaches, a town five hours by rail from Buenaventura, it is eight or ten days on mule or horseback. Few at present will undertake the trip except for business or scientific research.

Quito, the capital of Ecuador, far more accessible, and oftener visited, will yet be omitted by the majority; not because there is nothing to see, but because one with limited time for the tour will content himself with scenes of more or less similar character on the direct line of the journey. Moreover the reputation of the port of Guayaquil as a hot bed of yellow fever, to say nothing of bubonica, leprosy, and small-pox is such that most persons prefer to give it a wide berth. Formerly there was mutual recrimination between Guayaquil and Panama, each asserting that the yellow fever was imported from the other city; but now the case is clear. Panama has long had a clean bill of health, while Guayaquil (1912) was as bad as ever, if not worse. Some years ago our American Dr. Lloyd attempted to clean up the place, but on account of insufficient funds and authority succeeded in accomplishing little beyond getting the yellow fever himself. As a good part of the city lies low by the river's edge, the problem seems difficult; yet with sufficient money its sanitation may be accomplished. If the present plans of the Ecuadorian Government are carried out, by 1915 Guayaquil will probably again be on the same plane of health as Panama. Should one meanwhile be disposed to venture probably no harm would befall. Dr. Baker, American Consul at Guayaquil states (December, 1912) that the city may safely be visited from June 1 to October 1, but not at other times.

Furthermore, one desiring to visit Quito, the equatorial city, to see far famed Chimborazo, and Cotopaxi, the loftiest

of active volcanoes, may do this without going to Guayaquil, or at least without staying there, and thus he may proceed.

On the third morning after leaving Panama, on express steamer for Guayaquil, one is likely to find his ship anchored at the quarantine station, *Puná*, on an island at the mouth of the Guayas River. It is a pleasant sail north, up this broad stream, the most important in South America flowing into the Pacific Ocean. The low green shores are heavily fringed with trees or bushes. Ridges and peaks of blue will presently appear, possibly the snow-crowned Chimborazo, but this on rare occasions on account of incessant clouds.

Guayaquil, a few hours from *Puná*, appears from the steamer's deck a pretty place, stretching several miles along the river front, a city of 75,000 inhabitants. The buildings made of wood, plastered over to resemble marble, look quite imposing. There is a cathedral and other churches, and good public buildings; a Club, the Union, is said by one globe-trotter to be the best he had seen in the tropics save one at Hongkong. Worth visiting are the pretty plazas with rare and luxuriant vegetation, the market, and a great hospital on the hill above the town, fitted with modern appliances, and comparing favorably, one says, with the Ancon Hospital at Panama.

The swift current of the river is noticeable, the strong tide running rapidly, six hours each, up and down. Small boats, taking advantage of this, may thus go with slight effort in either direction; but with hard labor if the tide is adverse. Much used are the native *balsas*, made of tree trunks, five, seven, or nine lashed together, many with small houses upon them. With *balsas* they even venture upon the ocean as far as Paita. Panama hats are here purchasable, which with cocoa and ivory nuts are among the chief exports of the country.

To make the journey to Quito one may, the day of arrival, cross from Guayaquil by boat to Durán on the other side of the river, whence a railroad leads 297 miles to the capital city. The fare from Guayaquil is \$17.40 each way. Departing from Durán Monday, Wednesday, and Friday at 6.30 a. m., the train arrives at 6.30 p. m. at Riobamba, where the night is spent at the Grand Central Hotel, price one or two dollars.

Leaving Riobamba at 6.40 a. m. one arrives at Quito at four. Each day a halt is made for the noon meal at a way station. The train, at first passing among great sugar estates, then ascending gradually through a luxuriant tropical region, presently reaches the higher temperate zone where by contrast the night will seem decidedly chill. At 4000 or 5000 feet the way seems barred by lofty hills, but the American constructing engineer cut in the face of the granite a zigzag path with switchbacks of four levels making a rise to 9000 feet. After some distance through volcanic country, a similar cul-de-sac is surmounted by a similar switchback with a seven per cent grade to the Pass of Palmyra, 12,000 feet. Wastes of sand and shifting grass, resembling a sea-coast, are an unexpected variety in the scenery.

Descending gradually to Cajabamba, 11,000 feet, one passes, the first afternoon, splendid *Chimborazo*, still supposed by many to be the highest mountain in America, a *great mistake*, as its altitude is only 20,498 feet, more than that of Mt. McKinley, but over 2000 feet *less* than that of Aconcagua, on the border of Chile and Argentina, the highest measured mountain on the Western Hemisphere. Moreover, this tallest of the Ecuadorian Andes is surpassed by fifty or more peaks farther south; among these, Huascarán and Coropuna in Peru, Illampu, Illimani, and Sajama in Bolivia. The first ascent of *Chimborazo*, made in 1880 by Edward Whymper with two Swiss guides, was at the time considered a wonderful feat. The same year Whymper ascended the active volcano, *Cotopaxi*, 19,613 feet, farther east and nearer to Quito. Near *Cajabamba* are a few remains of ancient Inca edifices.

Beyond Riobamba, a little farther on, the road the second day goes lower to Ambato, 8000 feet, a town in a deep basin with a delightful climate, headquarters for trade with the *Oriente*. A broad sterile plain is crossed near the foot of *Cotopaxi*, a beautiful truncated cone, smoking continuously. Above the snow clad slopes, a gray and white cloud is formed in the shape of an enormous branching tree, which at length breaks off and floats away. Near the snow line of the volcano is a huge mass of rock called the Inca's head, said to have been the original summit of the mountain, torn off and hurled below on the day of the execution of the Inca, Atahualpa.

Beyond the Pass Chasqui is the charming green valley Machachi. In a bowl shaped depression entered by three gateways, through one of which the railroad passes, crossing a bridge over the Machangara River, is found the white, but red-roofed city, the capital famed as lying under the equator; it is within a quarter of a degree.

Quito. Beautifully situated among the mountains at an altitude of 9600 feet, Quito enjoys a climate as delightful as the prospect. In former days travelers have united their admiration for the scenery with groans over the accommodations provided. It is said that good hotels now exist, the Royal Palace, the Hotel de Paris, Hotel Americano, and Casa Azul. The city has a population of 75,000, including many charming and cultivated Spanish Americans, and more Indians, who in gay ponchos of orange and scarlet are a striking contrast to the ladies in smart victorias, the gentlemen in frock coats and silk hats, the officers in dress uniforms, and the throng of mules, horses, donkeys, and llamas, frequently crowding the streets.

On the principal plaza are handsome government and municipal buildings, the cathedral, and the bishop's palace. Among many beautiful churches and convents is the Jesuits' church, the interior superb in scarlet and genuine gold, and its choir singers imported from Europe. Quito, too, has one of the prettiest theatres in South America, which is saying more than you might imagine, if this is your first call on that continent. The temperature of Quito averaging 60°, ranging from 50° to 70° only, is comfortable enough to make exercise desirable, and variety is easily attained. A half day's journey will bring one to a deep sultry valley with tropical vegetation; hence every kind of fruit and vegetable is in the market. Or four hours will take one to a region of eternal frost. And thither every one should go, for from the top of Mt. Pichincha, 16,000 feet, at the foot of which is Quito, may be had a splendid view of twenty snow-clad peaks, from 15,000 to 20,000 feet in height.

CHAPTER VI

ON THE WAY TO CALLAO

ON board ship at the Balboa docks, recently enlarged by the United States Government, the surroundings at high tide are beautiful. On three sides are green wooded hills, some of which might almost be dignified as mountains. The wide stream coming down at the northwest is the Pacific entrance to the Canal. Below are pretty islands to one of which, Naos, the breakwater, three and a quarter miles long, will extend. At low tide, when the water has fallen 18 feet, as it does twice in the twenty-four hours, an ugly expanse of flats is visible on each side of the channel. Should one spend the night here, he may be so fortunate as to see the sun or moon rise, not set, from the Pacific Ocean; so far west is Panama City of the western shore of South America, at least of Colombia, for the Isthmus runs east and west instead of north and south.

As the steamer leaves the dock, one should linger in the stern of the vessel to look back at the charming picture. Thus standing and gazing rearwards, the city of Panama will soon appear on the right, finely situated on a promontory with water on three sides, thus with excellent opportunities for drainage, and now as healthy a city as may be found in the Torrid Zone, surpassing in this particular many of those in temperate climes.

The Peaceful Ocean will gently "Rock the Cradle of the Deep" and the voyage will be a pleasure. Formerly ten days to Callao, it is now six or seven. The weather is warm, with summer clothes in order, probably until Paita is reached; so warm that enthusiasts only will care for the vigorous exercise of deck golf, yet not uncomfortably hot. The crossing of the equator is made without ceremony: even with careful inquiry it is difficult to ascertain just when the equinoctial line is passed. The Pole star has vanished, yet in

our summer months a part of the constellation of the Dipper, still above the horizon, may be recognized far down the coast.

With no sight of land for three days, there will be time on this tranquil sea to brush up our Spanish, or if we have none to brush, at least to pick up a few words and phrases. Or there is opportunity for a brief review of South American history. Prescott perchance is in the library, or other books, historical or descriptive, of the various countries to be visited. That we see only what we are prepared to see is an old saying, as true of South America as of Europe. A slight knowledge of South American history and of present conditions will illumine the journey, increasing both pleasure and profit. A course of reading at home and a little study of Spanish will bring infinite reward. For those who have neglected this, brief allusions to facts of history, geography, etc., will be scattered here and there.

A BIT OF HISTORY

Every one has heard of the Incas and of the conquest of Peru by Pizarro, but a few particulars of the remarkable subjugation of a great people will here be recalled. As early as 1524 Francisco Pizarro, incited by rumors at Panama of a country at the south marvellously rich in gold, for the purpose of exploration only, made his first expedition to Peru. Landing at Tumbes on the south shore of the Gulf of Guayaquil, he found an opulent city, whence he proceeded along the coast as far as Trujillo. Satisfied by this reconnoissance as to the great wealth of the country, he was obliged to return to Spain to procure royal warrant for the invasion. This gained he set out from Panama in January, 1531, upon his extraordinary career of conquest. Partners in his adventure were Diego de Almagro and a priest, Hernando de Luque.

Again landing at Tumbes he advanced overland southward and in a fertile valley founded the present city of Piura. Some months were here passed, a vain delay for reinforcements; Pizarro meanwhile learning of the quarrel between the two Inca princes, the brothers Atahualpa and Huascar, and that the former, victorious, was now with a large retinue, ten days' journey from Piura, at the town of Cajamarca whither he had gone to take the baths.

To attempt the conquest of a great empire with an army of less than 200 men seems preposterous indeed, but the bold, one would say insane, Pizarro, had he not succeeded, at length set out with 180 men, 67 of whom were cavalry. However, these last were

equivalent to a mighty host; for horses, never before seen in this country, struck terror to the stoutest hearts. It was a hard march across the desert, then up over the great coast range of the Andes down to the longitudinal valley in which Cajamarca is situated. On the way they were met by messengers bearing royal gifts, with an invitation to visit the powerful ruler of this immense empire. Through narrow defiles where a large force might easily have been annihilated, the little army was permitted to march in safety. Upwards in bitter cold and rarefied air they toiled to a height of 12,000 feet or more until they looked down upon a beautiful valley, a prosperous city, and the camp of a great army.

With bold faces if quaking hearts they descended, November 15, 1532, to the city which they found deserted: that better accommodations, it was said, might be furnished to the distinguished guests. The next day, accepting the invitation of Pizarro that he should dine with him, Atahualpa with a large retinue, unarmed, came in royal state to the Plaza. In place of the courteous greeting from Pizarro which was here due, a priest, Father Valverde, came forward. Having expounded the chief doctrines of the Christian religion he thereupon demanded the Inca's allegiance to the Pope and to the Emperor Charles V. Upon Atahualpa's indignant rejection of this piece of bold and insolent presumption, Valverde called on Pizarro to make an assault. The signal was given, guns boomed, the cavalry charged upon the defenseless throng. Instead of the hospitality that had been proffered there was a scene of terrible slaughter. The Inca was seized and imprisoned, after which a ransom was arranged. The collection for this purpose of more than \$15,000,000 worth of gold dishes, plate, and other objects was followed by a second act of perfidy. Accused of various crimes, Atahualpa, instead of being released, was condemned to be burned at the stake; or if he would consent to embrace Christianity to have the easier death of strangulation. This he chose. Thus the courtly monarch of this highly civilized empire, one of the first on that continent to be baptized (revolting mockery) into the Christian faith, was ignominiously put to death after the most shameless betrayal of the rites of hospitality, the most brutal treachery, to be found on the pages of history.

Thus was accomplished the conquest of Peru. The Inca executed, his humble subjects made but little and sporadic resistance. Cuzco, the capital city, was visited and stripped of many of its treasures. For the conciliation of the populace, Manco, a younger brother of Atahualpa, was crowned; but the real power was placed in the hands of one of Pizarro's brothers.

Francisco then descended to the coast and, on January 6, 1535,

founded on the banks of the Rimac, a capital which he named City of the Kings in honor of the Epiphany, although Lima, a corruption of Rimac, is the title by which it has been called. Such a beginning was naturally followed by a period of dissensions and murders, which lasted twenty years. For nearly three centuries a Spanish Viceroy ruled over the country, until in 1824, at Ayacucho on the highlands of Peru, the last battle of independence was fought, the whole of South America was liberated from the domination of Spain, and the realms of the Inca became free to develop a new civilization.

Panama to Salaverry. For three days after leaving Panama the ship is out of sight of land, which is again approached near the northern extremity of Peru. This coast is unlike that of any other country in the world, to the uninitiated presenting a series of surprises. The first is the climate, which in the Torrid Zone one naturally expects to be hot, at least at sea level. On the East Coast of South America this is the case, but not on the West after reaching Peru. Panama, Colombia, and Ecuador have ordinary tropical weather, continuous heat with plenty of rain and luxuriant vegetation. Peru is in striking contrast. From Paita, 5° south of the equator, throughout the journey of 1200 miles along the coast, all within the tropics, the weather is so cool at least half of the year that exercise is a pleasure, while wraps and steamer rugs are frequently desirable. Of this moderate temperature the chief cause is the Antarctic or Humboldt current, which flows along the coast from the South Polar regions until, at Point Pariña, the western extremity of South America, it meets a hot stream and both turn westward across the Pacific. The proximity to the sea of the lofty range of the Andes also contributes to the coolness.

Another surprising phenomenon is the barren shore. The entire coast for 2000 miles, from Tumbes, to Coquimbo in Chile, is a genuine desert, save where, at considerable intervals, the fifty-eight streams in Peru, coming down from the mountains, afford opportunity for irrigation. The lack of verdure in Peru is not occasioned by the character of the soil; it arises simply from the absence of rain.

Paita. The fourth morning after leaving Panama the ship is likely to be at anchor in the harbor of Paita, having passed in the night the more northern Peruvian shore. Otherwise

one might from a distance perceive near Point Pariña the pipes and derricks of many oil wells. For the petroleum industry is important in Peru. In this Department, Piura, the oil regions cover an area as large as Holland. It is said that the petroleum is superior to that of the United States, having little paraffine and no odor; that the kerosene gives a better light, and that the crude oil may be employed as fuel after merely standing a few days in the open air. For the last ten years the oil has been thus used in the locomotives of the Oroya Railway; it is now similarly employed on the Peruvian steamers. There is a great field for the development of the industry in this and other districts of the country.

After several days on board ship most of the passengers improve the opportunity of going ashore. The regular fare as at other ports is forty *centavos* (twenty cents) each way for each person. Paíta is a curious place, a small village, yet the third port in Peru in the amount of exports and imports, serving a considerable district including the city of Piura, with which it is connected by a railroad of standard gauge. The walls of the houses are of bamboo, set perpendicularly, some overspread with plaster often partly peeled off, others destitute of covering. Climbing the hills back of the town you will perceive a genuine desert, in the distance fringed by low mountains. "Paíta," said the Captain on my first voyage in 1903, "is the dryest place on earth." From its appearance I was not inclined to dispute the fact, but having heard that it rains there once in seven years and in Iquique not at all I inquired how this might be. "That is easy," replied the Captain. "In Iquique there are heavy dews, here nothing, and now it has skipped one shower and it is almost fourteen years since it has rained." This was no idle jest. The drought continued until February, 1910, when there was a heavy shower, the first in nineteen years. There are no wells, hence all water is brought by rail and sparingly used; therefore there is no green. The town of *Piura*, on the contrary, 60 miles distant, is in an irrigated valley where the finest cotton is a staple production and where new irrigation canals are increasing the possibilities for agriculture. A few miles farther is *Catacaos*, where half of the 20,000 inhabitants are engaged in making the 260,000 Panama hats here annually

produced. While Ecuador is the chief seat of the industry, hats may be purchased at Paita to better advantage than at Guayaquil. The natives who come on board ship bring various articles for sale, paroquets, mocking-birds, fruit, pottery, ancient and modern, as well as the Panama hats. These of good quality may be purchased at from \$2.00 to \$12 or \$15 gold, the latter of the Monte Christo quality, all at about one-fourth of the price commonly asked for a similar article in New York. The best are rarely found in the United States at any price.

Some day Paita with its excellent harbor will become a port of great importance. A railroad 400 miles long is planned and has been surveyed to Melendez on the Marañon, the larger of the two rivers (the other, the Ucayali) uniting to form the Amazon. Crossing the Andes in one of its lowest sections, where a short tunnel at 5000 feet altitude will serve instead of the long ones, above 10,000 and 15,000 feet, through the mountains farther south, this road will bring the rubber country in the neighborhood of Iquitos, the chief port on the upper Amazon, within two weeks of New York, instead of the four or five weeks by way of Pará. On this route, too, are said to be millions of tons of iron, as well as coal and other minerals.

On leaving Paita, if not before, the tourist will be likely to feel the need of heavier underwear. The air in winter is damp and chilly. The temperature in my cabin was 60°. At this season clouds generally conceal the sun, making a gloomy sea, and the little patches of blue sky are small.

Etén, the next port, 161 miles farther south, the ship is likely to reach the next morning. An iron pier 2000 feet long is noticeable, though a good distance away. Callao is the only seaport below Panama having docks which may be approached by large ships. The slope of the beaches is so gradual that even for the use of the lighters long piers are necessary. Etén has an especially poor anchorage, an open roadstead where there is often a moderate swell, so that the passing traveler seldom goes ashore. Frequently passengers must be taken on board by means of a sort of barrel or hogshead destitute of one side. One person sits, another stands on the edge. Thus they are raised with windlass, chain, and pulley, and gently deposited on deck.

Pacasmayo, 34 miles farther, is usually visited the same day. This is quite a town with a railroad running 85 miles up country, some day to be prolonged to Cajamarca, now rather difficult of access.

The coast presents for the most part a study in browns, diversified by occasional patches of green, the size of which varies with that of the stream coming down from the mountains and the extent of irrigation in the valley. The great mountain range is surprisingly near the sea. There are indeed foothills, and in the northern and southern sections of Peru, back of the high bluffs which generally line the coast, a plain stretches away to lofty mountains. These, however, are near enough to be always in sight if it were not for another peculiarity of this rainless coast, the low clouds or mist which too often conceal or obscure them. Along the central portion of Peru beginning with Salaverry, the mountains come down to the shore in many bold headlands and are sometimes so disposed as to present an appearance of several ranges of varying altitudes, the rearmost, a frowning almost perpendicular black wall, which, back of Chimbote and Samanco, rises to the extraordinary height of 15,000 to 18,000 feet. Rarely, a snow-crowned summit is there seen peeping over a depression in the Black Range, the north peak of the great *Huascarán*, 21,812 feet above the sea, first ascended in 1908 by Miss Annie S. Peck with two Swiss guides. At present *Huascarán* is called the second highest measured mountain in America, but it is far more difficult to climb than *Aconcagua*, now holding first place. Had one a clear view of these great ranges, the voyage to the mountain lover would be of real fascination. As it is, the long halts at the various ports to discharge and receive freight become a trifle monotonous. Possibly, after the opening of the Canal, there will be through service with direct express to Callao from Panama.

CHAPTER VII

SALAVERRY—CHAN CHAN—CHIMBOTE— THE HUAILAS VALLEY

Salaverry, 66 miles from Pacasmayo, is usually reached during the night. At this port a few tourists may be tempted to disembark, perhaps with two objects in view; one to visit the ancient city of Chan Chan, the flourishing city of Trujillo, and the great sugar plantations of the valley; the other, for the purpose of transferring to the *caletero* boat, in order to land at Chimbote or Samanco, thence to visit the Huailas Valley to admire its magnificent scenery, including the peerless Huascarán. By taking at Panama the Sunday steamer (fortnightly) of the Peruvian Line, one may land at Chimbote or Samanco without change.

Salaverry, with one or two hundred houses on the desert shore, is a port merely, near a bold bluff which helps to make a fair harbor. A great quantity of sugar from the Chicama and Santa Catalina Valleys is the chief export.

Trujillo, eight miles by rail from the harbor, is a pretty city of 10,000 people. Founded by Pizarro in 1535 near the ruined capital of the Grand Chimú, it is one of the most aristocratic of Peruvian cities. First among these to proclaim independence, December 22, 1820, the Department received from Bolívar the name La Libertad. Trujillo possesses a pretty shaded plaza, fashionable for the evening promenade, several convents, and interesting churches, one of which, the San Agustín, is noteworthy on account of the excellent carving and rich gilding of the pulpit and high altar. It has a hospital, a university, a club, a hippodrome, a theater, and three daily papers; also, most important to the traveler, a respectable but far from luxurious hotel providing rooms, while fair meals may be procured at a Chinese restaurant close by.

Sugar Estates. Well worth a visit are the splendid sugar estates up the Chicama Valley, *Casa Grande*, *Roma*, *Cartavio*,

and others. The first, an hour by rail from Trujillo, is said to be the largest sugar plantation in the world, containing a total population of 11,000, one-fourth of which is engaged in labor in the fields or mills. This valley, which in the time of the Grand Chimú supported a great population, was in the last century almost a barren desert up to 1873, when a German visiting the valley discovered the ancient irrigating canal, bought up land, and soon made the desert blossom as the rose. This valley produces more sugar than the entire island of Porto Rico, sugar of the finest quality. In the temperate, equable climate, the cane all along the coast matures early, is unusually rich in sugar, and may be cut all the year around. It may be raised at a profit if sold at $1\frac{1}{2}$ cents a pound. The estates have the best of machinery, and expert managers who employ the latest and the most approved methods. Churches, schools, and hospitals are provided. The dwellings of the proprietors and superintendents contain most of the conveniences and luxuries of modern life, including telephones. The annual export of sugar from Salaverry amounts to 50,000 tons, and from Huanchacho near by to half as much more. Within 30 miles of Salaverry are also rich copper and silver mines, far more accessible than those on the plateau region above, and with a more agreeable climate. Their development on a large scale will not long be delayed.

Chan Chan. The tourist who is not a possible investor or looking after commercial interests may rather turn his attention to the great ruins north of Trujillo on the road to the small seaport, Huanchacho. Every one interested in antiquities should visit the ruins of Chan Chan, the largest and most important of the dead cities on our western coast. For a good pedestrian it is a moderate walk from Trujillo, though a horse may well serve the majority. Here the Grand Chimú once ruled over the twenty northern valleys of the Peruvian coast, from Tumbes on the north to Supe, well towards the Rimac valley on the south. Here was a civilization entirely distinct from that of the Incas, unhappily overthrown by them some four generations before the Conquest by Pizarro. A fertile plain 90 miles long was watered from three rivers by a remarkable system of irrigation. An aqueduct tapping the Muchi River high up in the mountains carried water across the

valley on an embankment 60 feet high. Remains of a great reservoir between Trujillo and Casa Grande indicate a capacity of two billion cubic feet of water. The city itself, open to the sea, was protected on the east from land invaders by a thick and lofty wall extending for miles along its borders. That it was at last compelled to succumb to the Incas is believed to be because these succeeded in diverting the water supply.

The site of Chan Chan, once probably the largest city in the New World, with an area of fifty or sixty square miles, is now a melancholy spectacle. What ruthless destruction has been wrought! What loss to the human race, through the overthrow of ancient civilization, again and again followed by relapses into partial or complete barbarism and toilsome progress upward! Will people ever learn to moderate their greed for wealth and power, and suffer others to dwell in peace after their own fashion!

For a cursory or careful inspection of the ruins a guide should be employed, as wandering at random one may miss or fail to understand the most important remains. In the labyrinth of walls with various enclosures containing numerous buildings, an immense mound is an occasional feature. One built of stone and rubble, 150 feet high, called Obispo, covers an area of 500 square feet. To the casual observer the design would not be obvious. Originally the mounds were in terraces, upon which buildings were erected with various passages leading to store rooms or burial chambers in the interior. With gardens around their base a splendid effect must have been created. The Spaniards early searched these mounds for treasure, with great success. From one called the Toledo three million dollars are said to have been taken; from the entire city \$15,000,000. A broad lower mound proved to be a cemetery, where in niches were found mummies in elaborate garments of fine cotton adorned with gold and silver. In the center is a structure doubtless for the performance of the funeral rites.

The great palace of the Chimú enclosed a large hall 100 by 52½ feet. Its walls, containing a series of niches, were covered between with stucco relief work in arabesque patterns. Two structures of unusual form are believed to be factories. Arranged around a square which had a reservoir in the center

were twenty-two recesses, probably for shops. Opening on smaller courts and passages were one hundred and eleven rooms, probably workshops for artificers in gold, silver, and bronze, and for designers, dyers, potters, and weavers. Wonderful ornaments of gold and silver have been found, fine textile fabrics, and most remarkable, the pottery, white, black, and pale red, which in immense quantities has been taken from the mounds called *huacas*, a name applied also to the objects. On the various specimens of this ceramic ware is portrayed every kind of fish, bird, mammal, and fruit, with which they were acquainted, also human beings, some in portraits, others as caricatures. There are groups engaged in war dances, in harvesting, and in other occupations. Some specimens of the pottery are said to be equal to any which has been fashioned, from the best days of ancient Greece up to the present time. Near the banks of the river Muchi at the south, stood a temple to the moon called Si An, where important religious ceremonies and processions took place.

Evidently the Grand Chimu was a powerful monarch with a magnificent court, ruling over subjects who lived in comfort. Their language, Mochica, is little known, as the race is practically extinct. When conquered by the Incas they were neither destroyed nor robbed of all their wealth. It was Pizarro and his followers who, though amazed at the greatness and beauty of the edifices, wantonly robbed and persecuted the inhabitants until the country was laid waste. The people and their civilization vanished and were forgotten. The language, wholly different from the Quichua, gives no hint as to the origin of the people. Neither does tradition lighten the mystery, nor their art, which relates wholly to their environment, though betraying some similarity to Mayo works. An exhaustive study of the language and of the archaeological remains is required to reconstruct the history of this remarkable people whose ancestors are believed to have dwelt here long before the Christian Era.

Moche. Between the city of Trujillo and the port Salaverry is an Indian town called Moche, the inhabitants of which may be remnants of this old race. They wear a distinctive dress, are proud of their unmixed lineage, and do not intermarry with others. The costume of the women, merely a chemise

with a piece of dark blue cloth wrapped around the body and fastened at the waist, to be seen anywhere in Moche, is not allowed in Trujillo.

Continuing from Salaverry by express steamer, one arrives the day following at Callao, a twenty-two hours' run.

Chimbote and the Huailas Valley. The tourist who desires to behold the wonderful scenery of the Huailas Valley and magnificent Huascarán, surely repaying a little trouble, at present transfers at Salaverry to the weekly *caletero* boat for Chimbote or Samanco, unless he has sailed in the Sunday Peruvian steamer. With the completion of the railway to Caráz and beyond, promised within a year or two (as, alas! since 1906), Chimbote will doubtless become a primary port, receiving calls from the express steamers. When this happens, no one should omit the delightful railway journey of 135 miles to Yungay, at the foot of the great Huascarán. At the moment, the trip may be enjoyed by the robust traveler, as the three or four days' horseback ride into the valley involves no hardship, save fatigue to those unwonted to such journeys.

The harbor of *Chimbote*, by some called the finest on the entire West Coast below Panama, is practically landlocked by a peninsula and several islands. It has an area of about 36 square miles, without a single rock below its placid surface. The usual pier extends from a sandy beach which affords splendid bathing facilities; but docks, approachable by the largest ships, could be arranged on one of the islands, which a bridge across a 200-yard channel would easily connect with the main land. The American capitalist, Henry Meiggs, the prime mover in the construction of the South and Central Peruvian Railways, had the foresight in the early seventies to perceive the great business possibilities of the Chimbote harbor, and planned the railway from Chimbote up the valley of the Santa River and along the Huailas Valley to Huaráz, 167 miles. A beginning was made, the road bed was constructed for 80 miles, the rails were laid for 60, when the Chilian war broke out. The invaders, having captured Chimbote, carried off the rolling stock and supplies, and destroyed whatever could not be removed. After the close of the war, Peru being bankrupt, the project remained for some

years in abeyance, during which time the road was operated only to Tablones, a distance of 35 miles. Under recent concessions some work has been accomplished and the road is now open 30 miles farther. It is expected that the Peruvian Corporation, at present in control, will soon complete the line to Recuay, a little beyond Huaráz, when better accommodations for tourists will surely be provided. At present some of the towns have no hotels whatever, while in others those existing are very poor. Happily the residents are most hospitable, and strangers with letters of introduction, or in some cases without, are agreeably entertained by some of the best families. Naturally, with better facilities for travel this pleasant custom will cease. At Chimbote the small and poor hotel where I stayed in 1906, if not already enlarged and improved, will doubtless soon be superseded by a more adequate establishment. Back of the town, together with a mound and walls remaining from an ancient city, are vestiges of an aqueduct, presumably constructed in Chimu days. When these are repaired the desert plain near by, which bears an excellent soil, will be fruitful enough to support the great city laid out by Meiggs and expected to follow the completion of the railroad. This project was originally undertaken, not for the purpose of conducting tourists to the splendid scenery of the Huailas Valley, nor primarily for the convenience of its present large population and the export of its agricultural products. The chief value of the railroad lies in its opening up the immense coal fields of the region. Along the Santa River are millions of tons of excellent coal, which some persons believed worthless, because it is chiefly anthracite and semi-anthracite, therefore non-coking; ignorant of the fact that except for smelting purposes it is more valuable than soft coal.

This railroad has an advantage over the others leading into the interior, in being able to follow the Santa River through a cut in the Coast Range, instead of climbing 15,000 feet over it. Thus by a moderate grade it will reach the Huailas Valley. A serious impediment to the construction is the narrow gorge through the mountains, impracticable even for a pedestrian; yet the difficulty will soon be overcome. After ten miles on the desert the road passes near sugar plantations and haciendas. The region of coal deposits follows, extending through

the mountain range and up the two lateral valleys beyond, the north in the direction of Cajamarca, the south, the Huailas Valley, to Recuay. The passage of the sombre gorge will be along the side of splendid cliffs with a foaming stream below, a continuous spectacle of superb grandeur. Turning south into the Huailas Valley, from one to four miles wide, the traveler has the White Range on the east, the Black on the west. The floor of the valley is beautiful with green fields of alfalfa and vegetables, with vineyards, fig and orange trees, chirimoiás, and other tropical and subtropical fruits, and with hedges of fragrant flowers: above are rounded hillsides bearing the grains, green or golden, of temperate climes, higher are cliffs either gray or black, and on the east white peaks of dazzling splendor rising 14,000, 16,000 feet above the valley, which itself slowly ascends from 4000 to 10,000 feet above the sea. The lower western wall attains an altitude of from 15,000 to 18,000 feet. Travelers may always disagree as to the finest scenery in the world, but few visitors to this valley will deny that it is unsurpassed in the Western Hemisphere. In scenic splendor excelling Chamonix, in mineral riches it rivals the Klondike; for on both sides, the mountains are veined with gold, silver, and copper, as well as the more useful if plebeian coal.

Huascarán. *Caráz*, a pretty town with a delightful climate at an altitude of 6000 feet, is situated at the base of Huandoy, 21,000 feet, while *Yungay*, at 8300 feet, has a still finer location on the lower slope of the great *Huascarán*, one of the most beautiful of the world's mountains, first climbed by Miss Peck on her sixth attempt, September 2, 1908, in company with two Swiss guides, her earlier efforts being rendered abortive through inability to provide other assistants than the inexpensive and incompetent natives. In recognition of this remarkable ascent to a summit 1500 feet higher than Mt. McKinley, Miss Peck was presented by the Government of Peru with a very beautiful gold medal. Of the twin peaks, the north was the summit attained: this, according to later measurement by French engineers, has an altitude of 21,812 feet; the south peak, 22,187 feet, pronounced by the guides impossible at the time, remains for some other mountaineer to conquer. Other snow mountains a little lower, of varying degrees of difficulty,



MT. HUASCARÁN, FROM AN ALTITUDE OF 10,000 FEET



LLANGANUCO GORGE

THE
JOURNAL
OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE

afford opportunity for a number of first ascents of 20,000 feet and upwards.

The tourist who is not a mountain climber will find ample reward for his journey in admiring these peaks from the valley. He should, however, take a few horseback rides, especially one from Yungay through the *Llanganuco Gorge*, by which there is a frequented pass between Huascarán and Huandoy to the mountainous and mineral region east of the White Range. This splendid excursion may be made in a single day from Yungay, but the feeble, or the novice in horseback riding may prefer to spend the night at a ranch house at the east end of the gorge, perhaps extending the excursion some distance beyond. In any case provisions should be taken from Yungay.

After a pleasant two hours' ride over the green foothills, one enters the narrow gorge four miles long, and a quarter to a half mile wide, where a sublime spectacle is presented. Practically perpendicular cliffs, more lofty than those of the Yosemite, rise on either hand, until at the center of the gorge one gazes at the sheer north wall of Huascarán towering 10,000 feet above the floor of the cañon which itself has a height of 12,000 feet. On the left, high up between massive triangular cliffs, gleam glaciers of the sharper Huandoy, almost as high as the snowy coverlet peering over the edge of Huascarán. A beautiful lake half a mile long, near the center occupies the entire floor of the valley. One rides along the pathway, in places cut out of the solid rock, in others supported by tree trunks, where a horse's stumble might easily precipitate his rider into the so-called fathomless lake 100 feet below; but the excellent horses climb veritable stairs with ease, and there is no occasion for disquietude. In the distant foreground a beautiful snowclad mountain is in brilliant contrast to the somber and awesome surroundings. A second lake follows; a silvery waterfall on the left leaps down a few thousand feet in a shimmering shower of spray. Beyond the lakes are meadows, then the ranch house. To continue thence to the south to behold the eastern face of Huascarán and other splendid peaks is well worth the sturdy traveler's while. At least the Llanganuco Gorge should be traversed by every visitor to the valley, though many of the natives of Yungay

have never admired its grandeur, as many residents of Buffalo have never seen Niagara Falls. Several delightful walks or rides should be taken to the hills back of Yungay, and to a buttress of the Black Range opposite. From one of the former, a little to the south, may be had the finest possible view of the mountain. A pleasant ride, of three hours each way (a whole day should be allowed for the trip), is to the gold mine Matarao (10,000 feet), above the village of Mancos. From this point Huascarán may be climbed; or one may walk up to the snow line and return the same day, if not affected by the altitude.

Before the completion of the railroad the tourist may adventure thither by riding up over the Black Range. Without letters of introduction to hospitable hosts, one should write a week or two in advance to the steamship agent at Samanco requesting him to have horses ready at the port, since none may be obtained there. One may ride on the day of arrival 30 miles to Moro where there is a poor hotel. The second day one may proceed to Pamparomás, where food and lodging of a sort are provided. A long third day's ride will bring one at nightfall to Yungay. From the altitude of 14,700 feet at the top of the pass in the Black Range, there is a glorious picture of the Cordillera Blanca, a row of snowclad giants extending north and south as far as the eye can reach; while a gloomy cañon close in front leads down to the beautiful valley. A truly hardy traveler may enjoy pursuing his way up the Huailas Valley to Huaráz and on to Cerro de Pasco, from Yungay a ten days' journey; either by way of Huánuco in the *montaña* section east of the mountains, or by Chiquián on the plateau near the foot of another splendid peak.

CHAPTER VIII

CALLAO TO LIMA—HISTORY

Callao. The harbor of Callao, six or seven days direct from Panama, in contrast to the ports where the ship has previously called, presents an attractive picture. If the arrival is in the early evening the brilliant and extensive display of lights indicates a considerable city and a wide array of shipping. By day one will admire the varied landscape, the busy docks and the city in front, the verdure of the Rimac Valley at the left with its scattered enclosing heights often partly hidden by clouds, and the contrasting bluffs of the islands San Lorenzo and Fronton on the right, which, with the long sandy bar called La Punta extending a mile out from the city, form a well protected harbor. Of the few such on the West Coast this alone has been actively utilized. Unfortunately the other chief commercial ports are open roadsteads. In 1537, two years after the founding of Lima, a city was established at the port, where soon there was a busy harbor, with vessels bringing all kinds of merchandise from Europe, and departing laden with rich cargoes of gold and silver and a few other products. In the early colonial days Callao was several times pillaged by pirates, but later suffered a far greater calamity, exceeding the recent disasters at Valparaiso and San Francisco, and paralleled only by the fate of Port Royal. October 28, 1746, a terrible earthquake occurred, accompanied by a tidal wave which engulfed the city, destroying all, save one or two, of the 6000 inhabitants. The site sank beneath the ocean. The present city was rebuilt to the north of the earlier settlement. Many ships lie at anchor in its harbor, some at the docks, others outside: sailing vessels, large steamers, both passenger and freight, a half-dozen men of war, Peruvian, British, perhaps American, the last probably flying the only United States flag visible. Seldom does a ship approach

the docks on arrival, and not at all if its stay is to be short. The freight is discharged into lighters, the passengers with their baggage into rowboats. As the water is always smooth, this, though inconvenient and an additional expense, is no great hardship. The fare to the shore is 40 *centavos*. A bargain should be made with the *fletero*, as the men are called who have numbers on their hats indicating that they are duly licensed. These men will take charge of your luggage, large pieces and small, delivering it safely at your hotel in Lima. They are likely to ask double what it is worth, not in comparison with New York prices, but with what it is needful to pay. The Lima Express Company has a fixed tariff of 1.50 *soles* for a large trunk, 80 *centavos* for each piece of hand baggage, although for several a reduction may be made. The figure agreed upon should include the fee for taking both passengers and baggage, except that the passenger will often make his own way from the dock to his hotel in Lima. Stipulation should be made for the delivery of the baggage within two or three hours, though it may then arrive much later. What one carries one's self should not be counted. If undecided what hotel to patronize one may arrange with the *fletero* for half price to conduct him and to transport his baggage to the railway station, where it may be checked to Lima. Trains every half hour, fare 20 *cts.* Leaving it at the station Desamparados in Lima, a block from the principal plaza, the tourist may look about and arrange where to go. Persons who have decided in advance may go with the *fletero* to the railway station or, after passing the customs examination at the dock, may turn to the right, then left, and walk a block or so to the electric cars which run every ten minutes to Lima, a ride of about twenty minutes through the center of Callao, and along a broad boulevard to the larger city eight miles distant. From the end of the line in Lima it is a walk of four blocks to the left and one to the right to the Hotel Maury; or a cab may be taken (fare for one or two persons, 40 *centavos*), to the destination desired.

The tourist on landing will give Callao but a passing glance, and is likely to return only to embark on his departure; but a few points of interest may be mentioned. A floating dry dock belonging to the Peruvian Steamship Company will re-

ceive ships of 7000 tons within the space of two hours. The city is of foreign aspect, with buildings of one or two stories. Noticeable are the women with stands of strange and familiar fruits and other edibles. The newsboys seem natural; the electric cars are of the best quality, some with compartments of the first and second class, with prices to Lima, 20 and 10 *centavos* respectively. Among many narrow streets are some wide ones; two or three small but respectable hotels afford accommodation at modest prices, one *sol* a day for a room, or at double the rate and more. There are several large plazas, (open squares) and a few Clubs, the English with good quarters fronting the bay, and with a fine view from the balconies, the Italian, Centro Naval, Union, Boat Club, etc. Among the churches, hospitals, and public edifices, the most noticeable is the Aduana or Custom-house, which is seen at the right from the car as it is passing through the first plaza. Of the churches, that of La Matriz is most important. The plaza in front is adorned with a statue of General San Martin; the Plaza Grau has a handsome monument to the celebrated Admiral of that name; while in the square called Dos de Mayo is a marble pillar surmounted by a bust of José Galvez, Minister of War, killed in the naval battle at Callao, May, 1866. Should one desire further information as to shops or other matters, inquiry may be made at the importing house of W. R. Grace of New York (ask for *Casa Grace*); or at one of the steamship offices, all of which are near the landing.

PERUVIAN HISTORY

For the fuller enjoyment and appreciation of Lima, a little more history may be an advantage. The heroes of Peru are many. The names of a few will often be heard, and a knowledge of their valiant deeds, a slight acquaintance with Spanish American History, is desirable.

After the news of the Conquest had been carried to Charles V together with the royal fifth of the gold treasure obtained by Pizarro, the Conqueror received an additional grant of seventy leagues of land to the south of the two hundred previously bestowed, which began in Ecuador about one degree north of the equator. To Almagro, Pizarro's partner, was given two hundred leagues south of this dominion. Just where the dividing line ran was a matter of dispute, each claiming that Cuzco lay in his territory. However, a truce

was declared until Hernando Pizarro should arrive with the documents, Almagro meanwhile setting out in 1535 on what proved to be an arduous and futile expedition for the conquest of Chile. On his return he again set up his claim to Cuzco. A contest with Hernando Pizarro ensued; Almagro gained possession of the ancient city, but was later put to death there by order of his old friend and ally, Francisco Pizarro. The claim of Almagro's son to his father's territory then being denied, this so enraged the followers of that brave and generous chieftain that they resolved to avenge his wrongs. Rushing into the house of Pizarro they slew him before he could arm himself to resist. Thus in 1541 perished the Conqueror after a few brief years in the enjoyment of his astonishing success.

For nearly three centuries afterward, Peru was governed by a Viceroy, who until 1740 had authority over the whole of Spanish South America. The Viceroy was assisted by a *Real Audiencia*, consisting of four *oidores* or judges who possessed extensive civil and criminal powers. Another *Audiencia* was also established at Chuquisaca, Sucre, in Alto Peru, now Bolivia. During the colonial days the Indians were greatly oppressed by the Spanish residents, who drew vast wealth from the mines and lived in luxury and splendor. At the same time the colonists suffered various vicissitudes, attacks by pirates, an epidemic of smallpox, two severe earthquakes in 1687 and 1746, and insurrections of the Indians; but in the main the country was prosperous.

For centuries the spirit of loyalty remained, but the North American and the French revolutions encouraged the spread of liberal ideas, which events in Spain made easier to be carried into execution. Although the Viceroy, Fernando Abascal, whose administration lasted from 1806 to 1816, made many concessions and improvements, it was impossible to stem the tide. After the abdication of Charles IV of Spain in 1808 in favor of his son Ferdinand VII, and the subsequent crowning of Joseph Bonaparte as king, orders were sent out for the colonists to transfer their allegiance to the new ruler. It happened, however, that a decree of Charles V in 1530, confirmed by Philip II in 1563, had authorized the colonies in case of emergency to convoke *Juntas* or political assemblies. These convening in the various colonial capitals declared loyalty to the banished King Ferdinand and refused to recognize the authority of Spain while in the hands of a usurper. The leaders were already planning ultimate independence, but the masses were not yet weaned from their loyalty. In Buenos Aires the Viceroy was expelled without trouble, but in the other colonies the struggle was severe and prolonged. In Lima the Viceroy employed harsh measures against the patriots. In 1809 royalist troops

were sent from here to Quito, and an army under General Goyeneche to Alto Peru, to oppose the revolutionists. February 13, 1812, independence was proclaimed at Huánuco, in 1814 at Cuzco; but at length the royalists everywhere gained the day, so that when Abascal retired to Spain in 1816, Buenos Aires alone remained in the hands of the patriots. Nevertheless, the successor of Abascal, General Pezuela, was the last of the Viceroy. Although Ferdinand was now restored to the throne of Spain, the spirit in favor of independence had become general. With an empty treasury, and general disorder in the departments of government, the Viceroy found himself confronted by a resurrection of the enemy who, after victories in the south and north, at length advanced upon Peru.

First came the Liberating Army from the south, organized in Mendoza by General San Martin, who, in 1817, had overthrown the royalists in Chile. Landing near Pisco, 122 miles south of Lima, September 7, 1820, General San Martin issued, September 8, a proclamation stating that he had come to liberate the people, not to make conquests. Robbery was prohibited; and bloodshed, except on the field of battle. The Viceroy proposed a conference which was held at Miraflores without result.

An army of 1000 soldiers under General Arenales, dispatched by San Martin from Pisco to the interior, after gaining many recruits defeated a royalist force near Cerro de Pasco. Meantime San Martin had proceeded to Ancon just north of Lima, and then to Huaura near Huacho, while Admiral Cochrane, with his new Chilean fleet, captured by surprise at night the Spanish frigate *Esmeralda* in the port of Callao. In January, 1821, the Viceroy abdicated and returned to Spain leaving in command General La Serna, who withdrew to the interior on the advance of the patriot army. July 12, 1821, San Martin entered the capital; July 28, which is regarded as Peru's Independence Day, proclamation was made in the Plaza in front of the palace—"From this moment Peru is free and independent by the will of the people and by the justice of their cause which God defends."

San Martin, now called the Protector, after organizing a provisional government and arranging for a national congress went to Guayaquil to meet General Simon Bolívar, who, having freed Venezuela and Colombia, was coming from the north. The particulars of the conference were not revealed. A disagreement was evident. San Martin, returning, resigned the government into the hands of the Constituent Congress which met in 1822, and withdrew to Argentina and Europe. The assembly conferred on him the title of Founder of Liberty of Peru, decreed a life pension and other honors; but the pension probably lapsed, as San Martin died in comparative

poverty in 1850 at the age of seventy-two. The hero's patriotism, courage, skill, unselfish devotion, high principles, and sterling character make him worthy to stand with the noblest patriots of history. His name in South America is honored as is that of Washington in North America, and with equal justice. It should be known among us, as is Washington's among them.

General Bolívar arrived in Lima September 1, 1823, and was invested with supreme power. There were now two armies of royalist troops in the interior; in July, 1824, the Liberating Army of the North began its march from the sea over the mountains to Cerro de Pasco. The two armies met, August 5, on the plain of Junín, where the patriots gained a complete victory. General Canterac, commander of the royalist forces, retired to Cuzco, where he was joined by the southern army under Valdez. The patriots under General Sucre proceeded to the Apurimac Valley. December 9, 1824, the two armies met in the hard-fought battle of Ayacucho, which resulted in a brilliant victory for the patriots and ended Spanish dominion in America.

Bolívar was made President of Peru for life, the Colombian troops were voted a magnificent reward; but in 1827 Bolívar retired to Colombia. Of the troublous times following, up to the war with Chile, little need be said. The name of Manuel Pardo may be mentioned, founder of the Civil Party and President from 1872 to 1876, an able statesman, scholar, and patriot, who was assassinated in 1878 while President of the Senate.

The War of the Pacific broke out in 1879, when Peru, in accordance with a treaty secretly made with that country, went to the assistance of Bolivia, after the Chilians had seized Antofagasta, then a port of Bolivia, on account of a quarrel over an export tax on nitrate. A noted naval engagement occurred off the coast of Iquique, when the Peruvian ship *Huascar* under Admiral Grau sank the Chilean *Esmeralda* under the heroic Captain Arturo Prat, who lost his life in the engagement. To his widow, Admiral Grau, with kindly spirit, sent a letter of sympathy with some relics which Prat had carried. The other Peruvian vessel, the *Independencia*, pursuing the Chilean *Covadonga*, ran upon hidden rocks and became a total wreck, a misfortune which proved a death blow to Peru. For four months Admiral Grau kept the Chilians at bay, but at last, October 8, he was obliged to fight the two Chilean ironclads at once. A shell striking the tower killed Admiral Grau. His four successors in command, one after another, met the same fate. When forced to surrender one-third of the entire force of 193 men had been killed or wounded. The coast, 1400 miles long, was now exposed to the enemy, and in November, 1879, the Chilians began a series of attacks, all of which were successful, excepting the battle of Tarapacá.

Many Peruvians met a heroic death, notably Bolognesi and others at Arica. In 1881 occurred the battles of Chorillos and Miraflores and the capture of Lima by the Chilians, who remained in possession of the city until the treaty of Ancon was signed, October, 1883.

According to the terms of this treaty, the province of Tarapacá was ceded to Chile, while Tacna and Arica were yielded for ten years, at the expiration of which time the residents were to vote whether they would continue as a part of Chile or return to their former allegiance. The fact that the provinces have remained under control of Chile without any such vote being taken, has for years been a cause of ill-feeling between the two countries, which at times have seemed on the verge of war.

CHAPTER IX

LIMA, THE CITY OF THE KINGS

HOTELS. Grand Hotel Maury, A. P., 6 to 20 *soles* per day. E. P., 2 *soles* up; Grand Hotel, A. P., 6 to 10 *soles*; Hotel Cardinal, E. P., 2 *soles* up. Excellent restaurant, reasonable.

Restaurants. Jardin Estrasburgo, and Marron's, excellent, fashionable restaurants; Berlin, German home-cooking restaurant.

Carriage Rates. 40 *ctvs.* a course, for one or two; by the hour, S. 1.50.

Post Office boxes in hotel. Postage rates, Peru, letters, 5 *ctvs.*; cards, 2 *ctvs.*; United States and Europe, letters, 12 *ctvs.*; cards, 4 *ctvs.* Population of Lima, about 150,000.

CHIEF POINTS OF INTEREST

Plaza de Armas, Cathedral, Government Palace, Portales, Plaza de la Inquisición, Senate Chamber, Hall of Congress, Market, Exposition Palace, Museum, and Park, Paseo Colon, Botanical Garden, Christóbal Hill. Excursions on Oroya Railway, and to Chorillos.

The monthly magazine, *Peru Today*, contains a Visitors' Guide and other valuable information. The weekly paper, *The West Coast Leader*, is of interest and service.

To be comfortably settled for a few days or weeks is of the first importance. Few will criticise the statement that the hotel *par excellence* of Lima is the MAURY, often called the best on the entire West Coast. A New York club-man whom I met there with his East Indian valet, declared that nowhere else in the world had he found so excellent a table at so moderate a cost. One here meets travelers, distinguished and undistinguished, foreign diplomats, and other resident and transient guests from all quarters of the globe. With its main entrances near the corner of Ucayali and Carabaya streets, the Maury extends through the block to Huallaga. The section at this corner, called the Francia y Inglaterra, the

VIEW OF
CALLAO HARBOR



CALLAO HARBOR—RECEIVING SECRETARY ROOT



PLAZA DE ARMOS, CATHEDRAL

French and English, was formerly a separate establishment. Though now a part of the Maury it preserves its old name, with its own room-clerks, and entrance on Huallaga. At the corner of the Plaza de Armas, the heart of the city, it has many rooms with balconies looking across the Plaza to the Government Palace and Municipal Building, while opposite the front is the side of the great Cathedral. In spite of the proximity of the Cathedral bells, which ring oft and loud, many persons prefer this end of the hotel on account of the pleasant outlook and the better circulation of air. It is, however, quite a walk through the corridors to the dining-rooms at the other end, and some distance to the bathrooms. So the majority prefer the Maury side, where the rooms are more elegantly furnished, the suites have larger parlors, a few have private baths, all have higher prices. The rates including meals are from six *soles* a day up to twenty, according to accommodations. Coffee and rolls are usually served in the rooms at the hour desired; *almuerzo*—breakfast, is from eleven to two; dinner from 5.30 to eight. At each of these meals there are half a dozen kinds of soup, several varieties of fish, 15 to 20 hot entrées, 10 or 12 cold dishes, and several vegetables; at breakfast, steak, chops, and eggs in any form, at dinner several roasts, and, most unusual in South American cities, five or six kinds of desserts. Also there is always fruit, at least oranges, bananas, and *granadillas* somewhat like a pomegranate. At *almuerzo*, strawberries may usually be had for the asking, though never on the bill of fare, while *chirimoiyas*, sometimes called custard apples, may be obtained with a considerable extra charge, this fruit being everywhere the most expensive variety. On the street or at the market they may be purchased for one-third the price at the hotel, from 10 to 40 *centavos* apiece according to the size. An Englishman once complained that the roast beef and mutton were not such as he had at home, and he didn't care for the other things, fussed-up dishes; but most persons, like the New Yorker, rejoice in what is provided, at least for a reasonable time, especially if they have come from plateau or desert or from almost anywhere. The *señoritas*, which are not young ladies but resemble scallops, and the crabs and lobsters, are particularly fine. The Maury has also two or three annexes

where rooms may be secured, and meals taken as desired. In the hotel, too, rooms alone may be procured, with meals à la carte in a different dining-room, or elsewhere at one's option. An excellent orchestra provides music of the best quality; at the Maury from 12 to 2 daily, and at the Exposition Restaurant under the same management, in the Zoological Gardens, from 5.30 to 11.30. A steam laundry is connected with the establishment; of course there are electric lights, as at all hotels, and in all cities of any size throughout the tour. Generally a button will be found near the head of the bed by which the light may be extinguished after retiring.

The Grand Hotel is on Huallaga street in the next block beyond the French and English; similar to the Maury, with good rooms and table at slightly lower prices, and preferred by many. Of cheaper hotels, the Cardinal has a reputation for excellent meals à la carte at moderate prices; this being situated on what is often called the main street, calle de la Union, half a block from the Plaza. The Jardin Estrasburgo, on the Plaza, opposite the Cathedral, is a restaurant of the first order, where meals are regularly served, and ices and refreshments at all hours. A European orchestra provides vocal and instrumental music. Opposite the Palace, under the *portales* is the Confiserie Marron. Afternoon tea and dinner are accompanied by pictures from a cinematograph, and by orchestral music. All tastes and purses are provided for.

Comfortably settled in a hotel, one will first enjoy a stroll on the *Plaza de Armas*, the real center of the city, important for its historic associations and for its present activities. For nearly three centuries the capital of Spanish South America and the seat of the Viceroys, Lima is a city the true history of which surpasses romantic legends: a place of wonderful charm to those who tarry long, the home of a courtly, cultivated society of agreeable, hospitable people, though somewhat exclusive withal, as are the social leaders generally in the large South American cities. To be from New York, Chicago, even Boston, is not an open sesame to the homes of Spanish American wealth and culture. However, the passing tourist will have brief time to make acquaintances; the few Peruvians whom he may casually meet are likely to make a favorable

impression, except upon those who regard courtesy as a waste of time.

The *Plaza de Armas* or Plaza Major was selected by Pizarro himself as the center of the city. The site was well chosen in proximity to the fine harbor of Callao, yet somewhat back from the water for safety from the buccaneers who in those days infested the seas. Although at the foot of the great Andes, off-shoots from which come down to the water's edge, the city is on practically level ground; for the hills about, as in general all along the coast, rise abruptly, like islands, from a flat surface, instead of the whole country being hilly and rolling as on our Atlantic shore. These small detached mountains, which make a pretty and effective background when they are not concealed by fog, are largely responsible for the disagreeable mist which in the winter season makes the climate rather unpleasantly damp and chill.

The chief part of the city is on the left or south bank of the Rimac River, by the side of which runs the Central Railway from Callao up to Oroya; the main station of Lima, Desemparados, being one block from the Plaza. As is customary, a pretty garden with flowers, trees, and shrubbery occupies a large part of the square, which has besides the usual band stand a bronze fountain in the center, no doubt the oldest in America, as it was presented to the city in 1578.

The great *Cathedral*, on the southeast side of the Square, built of gray stone with two towers, is the earliest and largest in South America. Although the Spanish invaders manifested little of the spirit of the Christ they professed to worship, they were ardent supporters of what they regarded as the true faith and were eager to establish everywhere the rites of their religion. Thus Francisco Pizarro, the cruel and perfidious conqueror, had no sooner selected the site of the city designed to be his capital, and drawn a plan of the streets and plazas than he himself laid the corner stone of the church, January 18, 1535. The first structure, though five years in building, was naturally of no grand proportions. But Lima soon becoming a metropolitan see with an archbishop, it was deemed fitting to build a great Cathedral. With interruptions and changes of design it was 1625 before the splendid edifice was finished and consecrated. This done the bones of

Pizarro were transferred thither, where they still remain. After a little more than a century this building was laid in ruins by the earthquake which in 1746 destroyed Callao; it was then reconstructed on the same site, though with less magnificence than before. The Cathedral has five naves, and ten chapels along the sides. In the Chapel of the Virgin on the left is a celebrated image, a gift from the Emperor Charles V, and under a glass case the remains of the Conqueror Pizarro, though their genuineness is a matter of dispute. The view in the central nave is imposing. The choir, said to be unequaled in America and seen to best advantage only on feast days when the high altar is illuminated, is distinguished by reason of the beautiful carving of the mahogany and cedar; the pulpit also shows handsome chiseling. In front is a Crucifix of ivory presented by Philip II, a valuable work of art. The solid silver altar and candlesticks are noteworthy. The unusually fine organ was made in Belgium. In the Chapel Arcediano, the Archdeacon's, which was founded in 1600 by Don Juan Velasquez de Obando and dedicated to Santo Goribio and other sainted Limanians, is an original painting by Murillo representing Jesus and Veronica, presented to the church by Señor Luna Pizarro. In the chapel of St. Bartholomew are paintings of a celebrated artist, Mateo Alexio, who visited Lima near the close of the sixteenth century and who is here buried. On a sidewall is the most famous work of a noted artist, Matias Maestro, called the Consecration of the Cathedral, the gift of Señor Ocampo in 1625. In the chapel, La Purissima, of especially rich construction, is the sepulcher of Señor Morcillo with his statue by a distinguished Peruvian sculptor, Señor Baltazar Gavilán. Here too are fine ivory carvings representing the apostles, presented by the Lima theologian, Dr. Feliciano de la Vega, who at his death in 1640 was Archbishop of Mexico. In the passage-way connecting the church with the sacristy may be seen on the right a painting of the various saints native to Lima, by Matias Maestro. On the wall of the right gallery of the church, a painting by Lepiani represents Christ in Prayer. In the sacristy are portraits of all the Archbishops, a copy of a Rembrandt, some relics of the Inquisition, and a font of unusual style. By the side of the Cathedral is the residence of the archbishop, never suitably



PORTALES AND MUNICIPAL BUILDING



CALLE JUNÍN—INAUGURATION OF PRESIDENT LEGUIA

TO THE
MEMBERS OF THE
COMMISSION

restored, and in its dilapidated condition marring the beauty of the Plaza.

On the northeast side of the Plaza is the historic residence of the Viceroy, now the *Government Palace*. Of the old colonial building, the scene of many gay and brilliant festivities in the days of great general wealth and viceregal splendor, nothing remains but the chapel with a handsome ceiling and with walls adorned with sixteenth century tiles reminding of Moorish art. No longer used for worship it is a store-house for archives. Around the several patios are suites used as offices of the various departments of government. Here may be found the Minister of Foreign Relations, the Minister of Justice and Education, etc.: also the apartment occupied by the President as his residence and for his offices. In the State dining-room banquets are occasionally given to distinguished guests, as to Secretary Root. During the Sessions of Congress, the President usually entertains at dinner the Members, *seriatim*, holding an informal reception after the dinner. The present occupant of the Presidential quarters, His Excellency Don Guillermo Billinghurst, a gentleman of English ancestry speaking fluently that language, was installed for a four-year term, not subject to re-election, September 24, 1912.

Although the main entrance to the patio of the palace is guarded by soldiers, an ordinary person is permitted to pass from the Plaza unquestioned. Commonly quiet and peaceful, on a day in May, 1909, there was here a scene of confusion and bloodshed. By a simultaneous attack made at each of the three entrances, the guards were overpowered and many of them slain, the rooms of the President were invaded, his secretary was murdered, and he himself was seized and carried to the street. Surrounded by horsemen he was dragged first one way then another, at length to the Plaza de la Inquisición, where with a revolver at his head demand was made that he should sign an abdication. This, President Leguía with much courage resolutely refused to do. After being two hours in the hands of his enemies he was rescued, safe and sound, by soldiers who, firing upon his captors, succeeded in taking prisoner most of the ringleaders. Two years later they were tried and convicted: but to avert a probable insurrection they were immediately pardoned, when they were welcomed by the pop-

ulace as heroes instead of the criminals they were. When such men seek to gratify their personal ambition at the cost of their country's welfare, for which the first requisite is peace and steady constitutional government, if they received severe punishment and reprobation rather than honor, the attempts would cease and stable prosperity would be assured. An interview with the President, if especially desired may perhaps be secured through the United States Minister. His office and residence are in a garden called *Quinta Heeren* in the block Carmen Alto of the street Junín, which passes the front of the palace. The streets, it should be said, have many names, a different one for each block; but in addition to these local appellations, which are very confusing to strangers, they have names belonging to their entire length, so that the block names may sometimes be dispensed with.

On the northwest corner of the Plaza is the *Municipal Building* or City Hall, containing the office of the Mayor, in Lima termed the *Alcalde*. Here in 1906 Secretary Root was received by Mayor Elguera and the Town Council before going to the Palace to pay his respects to the President. The hall and municipal offices are above stairs, the street floor being occupied by shops of various kinds. Half a block from this corner, down the calle de Lima, a continuation of Junín, is the Post Office, where notices are posted of the opening and closing of mails in connection with the arrival and departure of steamers, and of trains to the interior. Postage stamps may be procured on the right and letters registered. On the left, letters are mailed in different slots according to where they are going, hence care should be exercised. After regular closing time double postage will secure the dispatch of letters for an hour or two longer. With fast mails to Panama but once a week, it is important to be in season. There are letter boxes also in the hotels and on the streets, from which collections are made by carriers. The northwest and southwest sides of the Plaza, on which are the *portales*, are equally interesting in their way. Here are shops of great variety, displaying large assortments of goods, besides venders under the arches with wares spread on the floor. The walks are generally thronged with people, for along here are also clubs and restaurants, the latter already referred to. The Clubs

occupy apartments above the *portales*. The *Union*, at the corner opposite the French and English Hotel, has a series of handsome rooms where balls and banquets are occasionally given in honor of distinguished strangers and residents.

The streets of Lima are narrow, with the electric cars running so close to the curb that one needs to be rather careful, especially as the sidewalks are narrow also. Fortunately most of the buildings have but one or two stories, though a few of the later erections have three. Apart from the Plaza, the principal street for shopping is the calle de la Union, which passes across the Plaza in front of the Municipal Building. In the first two or three blocks from the Plaza there are drug stores, photographers, jewelry and book stores, shops of millinery and dry goods, etc., as on all the cross streets near. The fruit-sellers with little baskets of strawberries on long poles, the milkmaids perched high on mules or horses with great cans on each side, the ladies in *manta*, the close fitting black shawl, or the *mantilla* of lace, or in the latest Parisian modes, the cholos in plainer garb, the soldiers, the policemen ever blowing their whistles, the newsboys and news women, the sellers of lottery tickets, the fine private equipages, carriages and automobiles, and many many other things present variety sufficient to make an aimless stroll of continual interest. A glance into the open doorways away from the busiest streets usually reveals a paved court, sometimes with flowering plants or small trees, mayhap a fountain, and around the court the main rooms of the dwelling. A gem of typical colonial architecture, the old historic dwelling on the calle del Ucayali, a block from the Maury, should by all means be visited. It was the property of the *Marquis de Torre Tagle* and still belongs to his descendant, Señor Ortis de Ceballos, to whom is due its excellent condition. The massive stone doors, staircase, galleries, barred doors and windows, and the balconies both on the street and around the patio, present fine examples of the carving of that period. These may be examined by all. A wonderful collection of paintings in the possession of the family is not always on view. Inquiry as to the possibility of seeing it may be made by those who are especially interested. This extraordinary assemblage of more than eight hundred paintings of the classic schools contains

works of Michael Angelo, Raphael, Titian, Correggio, Leonardo da Vinci, Rubens, Poussin, Velasquez, Murillo, and others.

An important private collection of ancient furniture, carved and inlaid with artistic merit, is the property of Dr. Javier Prado y Ugarteche, Minister of Foreign Relations in the administration of President Leguia, and Dean of the School of Law; another is that of Don Carlos Watson.

For evening entertainment there are several theaters, the Politeama, seating 2000, El Olimpo, smaller, the Chinese, and the New Municipal Theater seating 2000.

If disposed to take a morning stroll, one may walk along Huallaga street past the side of the Cathedral until he comes, after four blocks, to the largest of the four market buildings. This, called the *Mercado de la Concepción*, occupies a whole square. In the second block from the Plaza on the right hand side is an unpretentious drug store of Estremadoyro where for 5 *centavos* may be purchased a small envelope of Persian powder, very useful for the fleas. Elsewhere two or three times as much must be paid for the same quantity in less convenient form. At the end of this block is the fine building of the *Bank of Peru and London*. Other banks of various nationalities of Europe will be observed, but none of the United States. However, the *House of W. R. Grace*, which will be found by turning to the right at the end of the first block, a little way down on the left, will serve the purpose if one takes a draft on their house, when letters may be sent in their care. Continuing on Huallaga past the Bank of Peru and London, the interior of which is worth looking at, though you have no especial business within, you come to the fine *Market* with little shops and cafés along the front and sides. Within the large hall is a great display of fruits, flowers, vegetables, meat, butter, eggs, etc.; everything at very reasonable prices except the last two. Flowers may be had for a song, a bunch of roses for 20 *centavos*, 10 cents; not American Beauties to be sure, but old-fashioned tea roses and others of various colors, fresh and sweet. Tuberoses, mignonette, heliotrope, and other garden flowers are there in profusion. How one would rejoice at such opportunities in any of our cities! Twenty, a hundred such markets are needed in Manhattan alone. Luscious fruit

of various kinds is always plentiful, most of it cheap. Two squares beyond the market one would come to what is now called *Plaza Raimondi*. Facing this is a great building for the *Police Quarters*, and just before that, one for the *Society of Mining Engineers*. In this Plaza the numerous Italian residents of Lima have recently erected a monument to the famous Italian engineer, *Antonio Raimondi*, who for many weary years wandered over the great territory of Peru, investigating its mineral resources, and making topographic observations which he embodied in a series of maps on a very large scale. Though not perfect in every detail, they are remarkably accurate in view of the difficulties under which he labored. One intending to make exploration in the interior should provide himself with Raimondi maps of the sections to be visited, these being on sale at two *soles* each at the large book stores in Lima. Crossing the Plaza to calle de Junín, the Church and Hospital of Santa Ana are on the right. Turning at Junín to the left, back towards the Plaza de Armas, at the next corner will be found the *Casa de Moneda* or Mint. This is not always open to the public but may be visited on one or two afternoons of the week, as may be ascertained by inquiry. The gold and silver coins here made are of the finest workmanship and of high grade metal. The Numismatical Museum of the Mint contains a splendid collection of medals from all parts of the world, as well as copies of all those coined from the time of Independence to the present.

At the next corner on the left is the Church of St. Thomas and beyond that on the cross street is the *Prison* and the *Correctional School for Women*. On the following corner of Junín, at the right is the Church of Caridad, Charity, facing the Plaza of the Inquisición. Turning here to the right we find in construction the new building for both *Houses of Congress*, while keeping straight ahead with the pretty garden on the right we should observe the handsome Doric portico of the building long used as the *Senate Chamber*, formerly occupied by the Tribunals of the Inquisition, which even on our Western Continent sought to stifle free thought. The Indians, luckily, were excused from its kindly ministrations, the only charity at that time extended to them. The ceiling of fine carved mahogany inspires admiration for its excellent

workmanship of native skill. A mahogany table now used for writing the laws of the nation was formerly in service for drawing up the decrees of death. A noticeable feature of this Plaza is an equestrian *Statue* in bronze of the liberator, *Bolívar*. Sculptured on the pedestal of white marble are bas reliefs representing the battles of Junín and of Ayacucho. In spite of the thin atmosphere at a height equal to that of the top of Pike's Peak, there was severe and gallant fighting on both sides.

One may return from here to the Plaza by calle Junín, or going one block to the right and then to the left may pass the Church and Plaza *San Francisco*. This imposing building contains in the sacristy a valuable collection of paintings; paneled ceilings with finely carved beams, and floor of blue tiles, in the cloisters; and carved stalls in the gallery. Following the car track to the left one soon returns to the Cathedral and Plaza.

Of the sixty-seven churches in Lima a few merit a visit. The most important are fortunately near the centre of the city. On the corner beyond the Post Office, as one goes from the Plaza, is the Church of *Santo Domingo*. The roof over the main entrance is spoken of as the richest and most elaborate work of art in Lima. In the floor of the first cloister the blue tilings laid in 1606 are noteworthy. The collection of paintings in the vestry includes a Murillo representing San Antonio, and a portrait of Santa Rosa by Matias Maestro. A celebrated chapel by Fray Martin de Porras contains a valuable collection of paintings by Roman Nicolette of the eighteenth century; fourteen works representing the twelve Apostles, St. Paul, and John the Baptist. Especially notable is a beautiful marble statue of Santa Rosa, standing on a silver pedestal which is studded with jewels. Santa Rosa, Isabel de Oliva, born in Peru in 1556, led a life so remarkable for its saintly purity that she was canonized by Pope Clement X, the only American ever distinguished by such an honor. She became patron saint of the whole of America, the West Indies, and the Philippines, her festival being celebrated August 30. Her remains repose in the church in the altar of Santa Rosa, on the base of which is portrayed in marble the scene of her deathbed. The church contains also a silver altar to Our

Lady of the Rosary, a madonna with a rosary of large pearls, and relics of Fray Martin de Porras and others.

At the corner where the Church of St. Domingo is situated one may turn to the left, and after two blocks on the calle de Camaná he will reach the Church of *St. Agustín* where the stone façade in the baroco style, the choir, and the table of the vestry deserve attention. The organ is called the finest in Lima. The platform of the ancient chapter room, now the chapel of the college, and a painting of St. Agustín are of interest, but the distinguishing ornament of the church is a remarkable statue in wood representing Death, the work of a monk, Baltazar Gavilán, who it is said died from the shock of seeing it during an attack of delirium tremens. Twelve oil portraits on copper of the Disciples, by an unknown artist, are called excellent in drawing, conception, and coloring.

After one block more on Camaná, and then one to the left, the Church of *La Merced* is reached on the corner of La Union and Ayacucho. This large and fashionable church has a high altar the front of which is silver elaborately worked. There are good carvings on some of the side altars, and paintings of merit in the sacristy. Continuing two blocks along Ayacucho and one to the left, one reaches *San Pedro*, the church of the Jesuits, also fashionable. The wood carvings of the entrance doorway and of the massive altar are worth seeing, also its burnished gold scroll work, the tiled wainscoting, and the paintings and carvings in the sacristy.

These churches are best seen during the forenoon, as in the afternoon they are often closed. There is an *Anglo-American Episcopal Church* on the calle de Carabaya in the sixth block from the Maury, Pacae 226, where service is held Sunday mornings at ten, others at varying hours. The chaplain, Rev. Archibald Nicol, lives next door, Pacae 228. At Callao there is another *Anglo-American Church*, not Episcopal, with services in English at 10.30 a. m. and 8.00 p. m., calle Teatro 25.

At least half a day should be devoted to a visit to the Palace of the Exposition which may be reached by electric car, down the calle de la Union, or by the calle de Abancay three blocks from the Maury in the opposite direction, as well as by carriage. By the former route one passes the Municipal

Theater on Union street, and beyond, the square in which the Penitentiary is located. This building is called a model and may be visited by interested persons who procure a permit from the proper official. The next square is a handsome shaded park called the Parque Colon. This contains a monument to President Manuel Candamo, which was unveiled Sept. 8, 1912. On the farther side of the park is a pretty building, the Institute of Hygiene, fitted up with laboratories of the latest pattern for the analysis of water, foods, etc.

In the center of the Plaza where the cars turn is the *Monument* erected to the famous *General San Martin*, whose name is honored all over South America as that of Washington in North America, an equally sincere and disinterested patriot, a great general; less happy in his later life, though highly honored after his death. He is here represented proclaiming the independence of Peru. On the column is a winged female symbolizing Glory. This handsome monument was presented to the city by Col. Lorenzo Perez Roca.

The *Exposition Palace* is a large white building where the Chamber of Deputies temporarily meets and the Department of *Fomento* is housed; with halls where lectures and concerts are occasionally held and grand balls are given. It was the scene of two functions in honor of Secretary Root, the first when he was incorporated into the University of St. Mark as honorary member of the Faculty of Administrative and Political Sciences in the presence of the President of the Republic and other officials of the University and the State. Here, too, was given by the Town Council of Lima a magnificent ball in Mr. Root's honor, to which 1500 invitations were issued. The elegance of the whole affair, in the decorations, gowns, refreshments, and other particulars was equal to that of similar functions in any part of the world. On the upper floor of the building is the *National Historical and Anthropological Museum*, open from 2 to 5 p. m. except on Monday. Over the latter section Dr. Max Uhle, a distinguished German scientist and a noted authority on prehistoric Peru, has long presided. The present Director is Emilio Gutierrez de Quintanilla. Dr. Uhle by excavations at Pachacámac and elsewhere greatly enlarged this collection, probably the most valuable in existence in its own specialty. Some of the specimens of pottery



PASEO COLÓN AND EXPOSITION PALACE



IN THE MUSEUM, EXPOSITION BUILDING

THE
AMERICAN
MUSEUM OF
NATURAL HISTORY
NEW YORK

are believed to have been produced previous to the Christian Era. The origin of the various articles and their period are indicated on the cases. Exceedingly curious and weird are many of the objects, and even one who has no taste for archæological relics can hardly fail to be interested in the extraordinary, sometimes beautiful, examples of pottery, in the figures of Indians, in the mummies, and other objects. The examples of the strange articles used at the present day by the Indians in the remote *montaña* region equally impress the observer.

The relics of early colonial days, souvenirs of various battles, of the generals of the War of Independence, will be examined with sympathetic regard by the tourist who has some familiarity with Spanish American history. An *Art Gallery* with a number of historical paintings, and others of general character occupies one corner of the same floor.

In a smaller building to the northeast is a permanent industrial exhibition which the specialist only will care to study. Between these buildings is the entrance to the *Park*, for which a fee of 10 *centavos* is charged. This park of thirty acres is a delightful promenade with shaded walks, palm and other trees, artificial lakes, a kiosk, conservatories with orchids and various other plants; it is also a *Zoological Garden*. Here and there are cages of animals of various kinds, one a spacious and lofty dwelling for many birds, including a pair of the famous condors, which the tourist is not likely to see on the journey except in captivity. Bears and other animals are in other cages. In 1911 the finest pair of lions that I ever chanced to see, and four lively cubs excited admiration. Within the park at the left of the entrance is an excellent *Restaurant* kept by the proprietors of the Hotel Maury, a fashionable place to dine. Down beyond the Zoological Garden, on the side where the electricians go to Chorillos, is the *Shooting Club* of Lima and fields for cricket, tennis, and other sports.

The Avenue on which the Exposition Palace faces is named the 9th of December, but oftener called the *Paseo Colon*. It is the popular driveway, half a mile long and 150 feet wide, leading to the Plaza Bolognesi. Lined on the side towards the city with handsome modern residences, it has along the

center a garden with trees, shrubs, and flowers, on each side of a broad walk. On the occasion of Secretary Root's visit there were additional arrangements for electric lights, and on the evening after his arrival the Paseo was brilliantly illuminated with these, as well as by a splendid display of fireworks. The Paseo was thronged with people who enthusiastically welcomed their distinguished guest.

The *Statue of Columbus* on the Paseo must not be overlooked. He is represented as the Discoverer of America, which is personified by the Indian woman kneeling at his side. This was the model for the statue at Colon and was designed by Salvatore Revelli.

The *Plaza Bolognesi* is a spacious circle, a fine setting for the statue in the center to Col. Bolognesi, who fell at Arica in the war with Chile, June 8, 1880. When asked to surrender he replied, "Not till I have used my last cartridge," and so fell. The statue represents the hero sinking with a mortal wound, yet still holding the flag of his country. Around the base of the column on which the hero stands are sculptured in marble allegorical scenes.

Six avenues are designed to radiate from this plaza, one, towards the center of the city, called the Central, to be a continuation of the calle de la Union. In the opposite direction extends the Avenue Pierola. On this a car track leads out to the suburb Magdalena, one of the pleasant shore resorts with which Lima is favored. Between this and the Avenue 9th of December is one leading to the *Hippodrome*. The races, generally held on Sunday afternoon, are attended by large crowds of fashionable and other people. The grandstand belongs to the Jockey Club, which has charge of the races and conducts them according to general custom.

Some distance beyond the Hippodrome is the *School of Agriculture* and the *Sugar Experiment Station*, both of these institutions well conducted and doing a valuable work for the promotion of agricultural industry. A great variety of plants is cultivated, and experiments are made with soils of many kinds. Instruction is given to a considerable number of students.

Proceeding from the Exposition Palace in the direction opposite to the Plaza Bolognesi, following the *Avenue Grau*,

one would after a few blocks pass the *Italian Hospital* on the left, and a little farther reach the *School of Arts and Crafts* on the right, *Escuela de Artes y Oficios*, of which Señor Valente is director. Here are taught clay modeling and sculpture, decorative art and composition, the history of art and æsthetics; and models of various works are usually to be seen. A foundry for art bronzes, it is hoped, will soon be added. Of still greater importance are the courses designed to produce honest and capable mechanics, which are well accomplishing their purpose.

In the next block on the left is the large building of the *Medical School*; the *Raimondi Museum* on the upper floor, open from eleven to twelve, has sections devoted to Botany, Ethnology, Zoology, etc. In the rear of the building is the *Botanical Garden*, containing specimens of every tree and plant to be found in Peru. Owing to the varied climates of the country arising from the difference in altitude, a wonderful diversity of productions results. The entrance is adorned with stately palms; gorgeous and beautiful flowers and shrubs will be found within. A *pe* tree bears a strange fruit, which, bursting open when ripe, shows within a pretty flower with scarlet seeds called the *chusia*. Cards of admission are obtained at the Medical School.

Continuing along the avenue one passes the large Dos de Mayo Hospital and still farther, on the Avenue of Circumvallation, the Cavalry Barracks and the Arsenal of War.

Other objects of interest are near the center of the city. The *National Library* is on the calle del Ucayali on the right hand side, at the end of the second block to the left or southeast of the one on which the Maury is situated. One of the first acts after the inauguration of the Republic, previous, indeed, to the final battles of the war, was the creation of the National Library. On the 17th of September, 1822, it was opened to the public with a collection of about 12,000 volumes, many of which were of great value. Unfortunately, while the Chilian army was in occupation of Lima in 1881, this library, then containing 50,000 works, was ruthlessly destroyed, a portion being carried to Chile, and the remainder scattered about the streets or sold at auction by weight. The later restoration of the library was chiefly due to Dr. Ricardo Palma, who re-

mained its Director until 1912. Dr. Palma by diligent effort collected many of the old books and priceless manuscripts; many patriotic Peruvians made contributions; sympathetic nations, Spain, Argentina, Ecuador, the United States, sent gifts. A collection of 5000 volumes was presented by the Smithsonian Institute. In 1884 the library was reopened with 28,000 volumes; it now contains 60,000. Still in its old location, a building earlier occupied by the College of the Caciques, an institution for the education of the descendants of the Inca rulers, a new building is greatly needed and no doubt will soon be provided. Señor Manuel Gonzales is the present director. Among the treasures of the library is an edition of Cervantes' works called the Argamosilla, printed from silver type.

In the same building on the floor above, are the rooms of the Lima Geographical Society, designed especially to foster geographical study and research in Peru. It has a considerable membership, including the most noted scholars and statesmen of the country; the library contains many valuable works and the leading geographical magazines of the world. The Society of Mining Engineers long had rooms in this building but have recently removed to their new quarters a few blocks away.

Turning the corner to the right by the side of the library building one will find at the next corner the Palace of Justice. One block more after a second turn to the right brings one to the calle de Azangaro, the Normal School for Girls occupying a considerable portion of the block on the right. The entrance is near the Church of San Pedro. Four blocks to the left down Azangaro, but fronting on the calle del Inambari, is the University of San Marcos, the oldest in the Western Hemisphere, founded in 1551, almost a century earlier than Harvard. Established under a charter from Emperor Charles V and his mother, Queen Joana, it was at first in the monastery of Santo Domingo and under the charge of that Order. Twenty years later by order of Philip II the University was secularized, and in 1574 it received the designation of San Marcos. In 1576 a building was constructed for its use in the Plaza de la Inquisición. After two centuries in this location it was transferred to its present site, formerly that of the Jesuit college



STATUE OF BOLIVAR, PLAZA DE LA INQUISICIÓN



PERUVIAN MUMMY, UNIVERSITY OF SAN MARCOS

of San Carlos, then united with the University. Dr. Don Luis F. Villarón has been rector of the University since 1905. The University embraces Schools or Departments of Law, Medicine, Theology, Science, Philosophy and Letters, and Administrative and Political Science, in which a high standard of scholarship is maintained; the Medical School, as we have seen, occupies a separate building. The rooms are grouped around several patios. There is an assembly hall with a handsome carved ceiling, and in the museum are curious mummies. A University Review is published monthly. A few years ago a Centro was established, somewhat after the fashion of the Harvard Union. Women are admitted to the University.

The Engineering School is in quite another direction on the calle del Callao, four blocks from the southwest corner of the Plaza de Armas. This, established in 1876, continued under the direction of the Polish engineer, Señor Eduardo Habich, until his death in 1911. The school has complete laboratories, and courses in mining, civil, electric, and mechanical engineering; all of which in a country like Peru are of infinite importance.

The fine large school for boys in a splendid building on Avenue Alfonso Ugarte, the Collegio de Guadalupe, well deserves a visit.

The portion of Lima on the right bank of the river Rimac should not be ignored. Passing from the Plaza by Carabaya street, one comes to the fine new railway station of Desemparados, completed in the fall of 1912. After one block to the left a turn to the right leads one to the bridge across the Rimac, the river recently improved by being enclosed within a suitable channel. So much water is drawn off for irrigation all along its course that little is left in the ancient river bed. To one who wishes to see the life of the common people the walk affords good opportunity, but a drive to the *Jardin de los Descalzos*, the Garden of the Barefooted Friars, will be generally preferred. The garden extends half a mile or more along a broad avenue. It contains, besides plants and trees, handsome urns, marble benches, and twelve statues representing the Signs of the Zodiac. At the end is a fountain, and beyond, the ancient Church and Convent of the Friars under the shadow of the hill, *San Christóbal*. A path leads up from

this point, but the more usual route is farther east. Returning from the Garden, one may take the first turn to the left, then one to the right past the *Bull Ring*, seating 8000 spectators and called the largest in the New World. It lies practically in front of the *Balta Bridge*, a modern structure named for one of the Presidents. The *Bull Ring*, said to be the second largest in the world, is on Sunday afternoons often thronged with spectators to witness this cruel sport, which will doubtless before many years be discontinued, as already at Buenos Aires and in most other cities of South America. Before returning by the Balta Bridge, the *Alameda de Acho* on the right hand should be visited. This was once a fashionable promenade and still boasts of large handsome trees, tall poplars forming three roadways.

It would be a pity to ignore the *Cerro* or Hill of *San Cristóbal*, which rises 900 feet above the city. There is an easy path by which the ascent may be made, but for the benefit of the lame and the lazy an *Aerial Tramway* has recently been established; the transit requiring 8 or 10 minutes begins at Los Baños del Pueblo near the Alameda de los Descalzos. The summit on a clear day affords a delightful view of the city, the irrigated valley, the hills, the mountains, and the sea, which should well repay the effort of the climb, itself agreeable except to the incorrigibly indolent. More enticing than the view to some, will be the opportunity of visiting the *Great Tower for Wireless Telegraphy*, which rises 350 feet above the crest of the hill. It is, indeed, a triumph for wireless. Messages across the sea seem not so wonderful: but to send them over mountains and broad plateau, over or through a wall three and a half miles high and 100 miles thick appears marvellous. This wireless station, one of the highest powered in the world, has sent messages not only to Iquitos on the Amazon, 1030 kilometers away, for which purpose it was especially designed, in order to ensure communication between the central government and this important Peruvian commercial outpost, but also to Manaus in Brazil, 2300 kilometers (1435 miles) distant. The great mountain range between the two cities averages 18,000 feet in height, while beyond are dense tropical forests. The construction company did not venture to guarantee the success of an untried service, promising only

to build an intermediate station if necessary. The great success of the undertaking renders this superfluous. The station at the other end is Itaya, two miles from Iquitos. The towers are identical, triangular steel structures, each weighing 120 tons. They rest on a concrete base by a steel ball point, insulated by thick glass plates. Each is kept vertical by means of three heavy steel cables at three angles. A power of 10 kilowatts is supplied but 7 only are used. The service was inaugurated June 16, 1912, with suitable ceremonies both at Lima and Iquitos. President Leguia, other officials and citizens to the number of 3000, made the ascent of the Cerro, though the hilltop was not large enough to contain all, the crowd as it were slipping over the edges. After various speeches the President started the machinery. At 5.05 a message of congratulation was sent and at 5.17 the reply was received. Then was unveiled a bronze tablet bearing the inscription in Spanish: "This station was inaugurated in 1912. His Excellency, Augusto B. Leguia, President of the Republic, Dr. José Manuel García, Minister of Fomento, Dr. Edmundo N. de Habich, Director of Fomento. A. E. Tamayo and K. J. Holmvang, engineers in charge of construction. The Telefunken Company, June, 1912."

A monument which should not be overlooked by the tourist is the *Dos de Mayo* standing in a circle, and passed by the electric cars to Callao. This monument commemorates the victory of May 2, 1866, when an attack of the Spanish fleet upon Callao was repelled and the Spaniards were finally driven from the Pacific coast. A column of Carrara marble 75 feet high is surmounted by a statue of victory. Around the base are figures representing the countries of Peru, Bolivia, Ecuador, and Chile.

CHAPTER X

THE SUBURBS OF LIMA—THE OROYA RAILWAY— CERRO DE PASCO

Chorillos. With sufficient time at one's disposal a few days may be pleasantly spent in visiting the shore resorts near the capital. The electric cars which pass on the calle de Abancay, the third street southeast from the Maury, are the means of transit to Miraflores, Barranco and Chorillos, all pleasant places of residence, though Chorillos is especially fashionable. The last named, before the Chilian war, was the most frequented summer resort in South America, but after the battle of Chorillos in 1881 it was completely destroyed by the invaders. Rebuilt during the last quarter of a century, it is again beautiful with many charming homes. The town is located 100 feet above the beach of a sheltered cove, which is partly enclosed by a cliff. A promenade along the edge is a fashionable resort for tourists and townspeople, to enjoy the cool breezes, and the sunset in the broad Pacific. Close at hand an eminence of 2000 feet called Morro Solar enhances the beauty of the scene. A shady pathway leads down to the beach, which affords excellent bathing with a moderate surf. The regular population of 3000, greatly increased in the summer, is daily further augmented by those who come for the bathing and the other diversions of a watering place: boating, music, dancing, etc. At the Casino are held many fashionable social affairs; and the Regatta Club gives frequent entertainments when the bay, covered with boats of various descriptions, presents a pretty spectacle. Worthy of a visit is the Military School here located, a fine institution for the education of army officers, and an excellent training school for the Indian soldiers.

Beyond Chorillos the electric cars continue by a tunnel through Morro Solar to La Herradura, another bathing resort.

Barranco and *Miraflores*, nearer to Lima, are almost continuous with *Chorillos* and are connected by pleasant, shaded driveways. *Magdalena*, a shore resort still nearer Lima, is reached by a different electric car line.

A very popular resort with a fine new hotel, the *Eden*, is *La Punta*, down beyond *Callao*, whence electric cars, connecting with those from Lima, for five *centavos* carry passengers to the extremity of the sandy point ever refreshed by cool breezes. Here the Naval School's excellent new building is located.

Ancon. Twenty-five miles north of Lima, on the opposite side from *Chorillos*, is *Ancon*, more especially a health resort, its sandy soil and dry atmosphere making it especially desirable for persons with pulmonary and bronchial affections. There is good bathing, a tennis court, one or two hotels, the *Grand* said to be comfortable, and many cottages; but it is less attractive than the resorts at the south. It has, however, an allurement peculiarly its own in being renowned as a necropolis of pre-historic treasures. *Ancon* is reached by a steam railway from the *Desamparados* station in an hour and a half or so, and the ride gives one a view of the genuine unirrigated desert. The journey may now be pursued to the town of *Huacho*, about 90 miles farther.

Pachacámac. Persons who are interested in antiquities should make the excursion to *Pachacámac*, whose ruins are believed to antedate any others in Peru and to go back two or three thousand years. The place is not accessible by rail, carriage, or boat, yet it may be visited in a single day by a vigorous, enterprising person who is able to make suitable arrangements in advance. The site of this ancient sanctuary and city is nearly 25 miles from Lima, in the direction of *Chorillos*. Thither one should go by the earliest morning car, to be met there by a guide and horses with which to pursue the journey. Dr. Max Uhle made extensive excavations in this region. The ruins are in the *Lurin Valley*, the loveliest south of Lima, watered by a stream smaller than the *Rimac* but of constant supply. In the period of the invasion it was the more thickly populated of the two. Wars, and the efforts for the conversion of the natives by religious orders caused the ancient city in the course of the century following the Spanish invasion to become a scene of desolation.

Provisions for a substantial luncheon should be taken in saddle bags, though fodder for the animals may doubtless be procured at the hacienda near by of Don Vicente Silva. A desert called the Tablada de Lurin is crossed between the Rimac and Lurin valleys. Barren islands are in view on the right with myriads of pelicans and other sea-fowl. The desert sands drift over the ruins, on the north side of the valley, 600 yards from the ocean. A few *tillandsia* plants show a little green in winter. The hooting owl, the lizard, and a small viper are the only forms of life. The neighboring hills rise 150 to 250 feet above the desert. In the distance two villages with their church spires may be seen, Pachacámac three miles back from the sea on the other side of the river, and Lurin near the coast, a mile and a half from the ruins. To the south beyond is desert; to the east, 45 miles away, the outlying bulwarks of the Andes rise 9000 feet. In an early period the coast for 120 miles from Supe to Huaman was under the sway of Pachacámac. There are extensive remains in many places about, and traces of an ancient road with a wall along the center, one side for the ruler and his retinue, the other for common people, each section 16 feet wide. The place was conquered by the Incas 170 years before the invasion of the Spaniards, when all its wealth of gold had already disappeared. The ancient city, $2\frac{1}{2}$ miles long and $1\frac{1}{3}$ broad, included four hills, on one of which in the center of the town the Incas later erected a temple to the Sun. The original sanctuary to the Creator god, not to be confounded with the Sun god of the Incas, stood at the foot of a hill on the north side of the town nearly on a level with the city. The temple which faced the coast to the northwest was 400 feet long and 180 wide with terraced sides leading to a plateau above, 330 by 130 feet. There are rooms supposed to be for the reception of envoys, others for sacrificial purpose. They were gorgeously decorated with frescoes of bird and animal designs, with doors incrustated with coral, turquoise, and crystal. Pilgrims who came a thousand miles with offerings were obliged to fast for twenty days before entering the first court, and a year before ascending to the holier shrine of extraordinary sanctity above. The cemeteries naturally furnished many valuable relics, mummies, bones, and skulls, fragments of cloth, and a great variety of

articles. The cemetery connected with this temple was the most crowded, though burial here was reserved for princes and pilgrims who brought rich offerings. Many objects have a strong resemblance to those of Tiahuanaco. A slab of Chavin de Huantar and a richly ornamented poncho at Ancon are of similar style. It is estimated that there were from 60,000 to 80,000 graves here, some in open cemeteries, some in dwellings, besides those in the temple. Most of these were rifled ages ago. This is thought to be a seat of the earliest civilization of the coast, perhaps extending to Ecuador, while the Chimu culture either descended from it or was influenced by it. The city wall was from 11 to 13 feet high and 8 feet thick. There was an inner as well as an outer wall. The streets were 13 to 16 feet wide. There were large detached edifices, resembling ruins at Huatica near Lima, and one group of crowded buildings. The term Pachacámac is of Quichua origin, the earlier name being different, perhaps Irma the same as Wiraqocha. The Sun temple half a mile from the sea is on a terraced rocky height a mile and a quarter in circumference; but it does not compare with the Mexican pyramid Cholula. The rooms may be traced, and the stairway with steps four inches high and one foot four inches wide. A convent for the Sun maidens, accommodating two hundred, fronts the green fields. The cemetery on the southeast terrace of the Sun temple shows that all were women who had been strangled in obvious sacrifice; thus suffered also many children of all ages for the propitiation of their cruel deity.

The Oroya Railway. Whatever else may be omitted from one's programme of sightseeing in Peru, a journey over the Oroya road should on no account be missed. Long enjoying the reputation of the highest railway in the world, it affords an opportunity to climb with ease in a few hours to a height as great as that of the summit of Mont Blanc, to behold scenery of wonderful grandeur, and a historic region of remarkable mineral wealth, the second of the three great longitudinal divisions of Peru. Farther on, with a little more trouble, one may most conveniently obtain a glimpse of the third and by far the largest of Peru's three natural divisions; as yet thinly peopled and little known, but ultimately, perhaps, to prove the richest.

The practically rainless coast region from 50 to 100 miles wide, all desert except where irrigated, we have already seen. Next comes the sierra district of mountains and tableland, from one to three hundred miles wide, where, beyond the Coast Range, there is plenty of rain and snow. Varying in height, width, and in the number of parallel mountain chains, the greatest altitude is in the southern and central portions, decreasing north of 7° S. Lat. The lofty snowclad mountains, the multitude of lesser peaks, the lakes, small and large, the countless streams, the delightful valleys, the desolate plateau sometimes called the *puna*, cut by narrow gorges, present a marvellous variety of scenery, climate, and productions. Here are two-thirds of the inhabitants of the country. The forest region on the eastern slope of the mountains with the lowlands beyond, all called the *montaña*, is at first wonderfully beautiful with soft, genial climate, though below an altitude of 2000 feet it becomes rather warm, in a few spots unhealthy.

By the Oroya Railroad a great elevation is attained in fewer hours than can be duplicated elsewhere in the world except in balloon or aeroplane. Indeed, the time of the ascent is so brief that some persons suffer from the sudden change in the pressure of the atmosphere. This fact has given rise to alarming representations, on the part of many native and foreign residents, of the danger involved in the journey, so that many tourists are frightened out of the excursion to whom it would be a genuine delight. The truth is that of the thousands who each month go over the road, the majority suffer from *soroche*, mountain sickness, not at all, or with little and temporary discomfort. A slight headache is common; it may be severe, or accompanied by nausea and vomiting. A few have become dangerously ill and deaths have occurred, as on Pike's Peak. Two classes of people should not take the risk, those with weak hearts and those who are both stout and full blooded. Persons merely delicate in a general way are less likely to suffer inconvenience than some vigorous athletic persons. One doubtful about his heart should have it examined. Apprehensive persons who would be *sure* to avoid trouble may get off at Matucana, and a day or two later comfortably pursue the journey. It will be easier for every one

to go the day previous to Chosica to spend the night, thus avoiding an unreasonably early start in the morning. Ordinary prudence may suggest that one should be careful not to over-eat the day before, and be very abstemious on the trip, especially as to alcoholic liquors. At the highest points one should move slowly or not at all. A brisk walk may produce dizziness or worse.

The Central Railway of Peru, a standard gauge line, was begun in 1870 by the American financier, Henry Meiggs, and completed to Chicla, 88 miles from Callao, in 1876. On account of the troubles resulting from the Chilian War it did not reach Oroya until 1893. For some years this was the terminus of the road and in one sense is so still, as the natural continuation would be east, over to the *montaña* country. There are, however, branches in two different directions, north and south; the former, an American line of the same gauge to Cerro de Pasco, the latter, a part of the Central system owned by the Peruvian Corporation, now open to Huancayo and being gradually extended to the southwest, ultimately to reach Cuzco, where it will connect with the Southern Railway managed by the same corporation. Both of the *branches* are on the line of the Pan American Railway, by which it will some day be possible, perhaps within a decade, certainly in two, to go by rail from New York to Buenos Aires, a wonderful journey through ever changing and delightful scenes. By the time these 250 miles from Huancayo to Cuzco are finished, which should be by 1918, all the southern part from Lima to Buenos Aires will be ready, as Argentina's portion is now complete and Bolivia's will be finished soon. The section from Quito to Panama will linger longest. When finished, the road in my opinion will be a far greater bond of union between North and South America than the Panama Canal.

The Oroya Railroad follows the Rimac Valley up to its culminating point, with an occasional detour into a side cañon to gain additional height. It was a man of courage and large ideas who forty years ago planned to climb with the iron horse, instead of the ancient burro and llama, the steep and lofty wall which, rising in its *lower* points to a height of from 14,000 to 17,000 feet, stretches for 1000 miles along the coast of Peru within 100 miles of the sea. With an average grade of four

per cent it was the second road from the Pacific to cross the continental divide, though it still remains to be continued, as Meiggs planned, down to a point open to steam navigation on one of the branches of the Amazon.

Setting out on this trip from Lima, one must rise early, as the train leaves the Desamparados Station at 6.50 a. m., Monday, Wednesday, and Friday. By strenuous insistence the night before, you *may* be able to have coffee and rolls brought to your room before your departure; but if you fail, a ten minutes' halt at Chosica at half past eight affords opportunity to repair the omission.

The lower part of the Rimac Valley has an apparently level floor of considerable breadth, with vegetation of a sub-tropical character, irrigation affording an ample water supply. At first banana groves and fields of sugar-cane are numerous; patches of Indian corn and alfalfa continue far up the cañon. The view, for a short distance somewhat open among isolated hills, narrows as we enter a genuine valley with steep and ever higher walls, their slopes thickly terraced and bearing remains of ancient highways and villages, evidence of a formerly far greater population than now. After much wandering among the ruins near Chosica, Professor Solon I. Bailey estimated an earlier number of 6000 inhabitants, where now there is one-tenth of that number.

Chosica. This town, at train time a busy place, is growing rapidly since, with several daily trains, it has become a suburb of the capital 25 miles distant. It is especially a winter resort, as, located just beyond the edge of the fog bank or cloud which in that season hangs over the coast, it has plenty of sunshine. It is much patronized by those natives and foreigners who find the chilly dampness from May to October rather trying to their health. The Gran Hotel de la Estacion, close to the station, affording comfortable rooms, is the best place to stay over night. On the opposite side of track and river are many pleasant dwellings in pretty gardens and another hotel, rather a Sanatorium, fitted up with all modern appliances such as sun rooms, electric apparatus for baths, and many other devices to aid the semi-invalid or debilitated to recover his strength. In the season, Chosica is served with three daily

trains each way, including an express with parlor car in one hour.

Above Chosica the scenery becomes wilder, the valley narrower. The fall of the Rimac is so rapid as not only to compel many curves and V's but to make an incursion into a side valley desirable. Thus the road goes half a mile up the Verugas Gorge which it crosses by the highest bridge on the road, 225 feet, with a length of 575, returning on the other side to the Rimac at a considerably greater elevation. Frequently the floor of the Rimac Cañon has room only for the rushing stream. The road passes high up on the slope, or through one of the sixty-five tunnels. Many times the river is crossed; sixty-seven bridges may be counted. At one point the side walls are so precipitous that it was necessary to lower workmen from the top of the cliff above. Sitting in a swing they cut footholds in the rock preparatory to the beginning of the work. Some of the cliffs are more than a third of a mile in perpendicular height.

Matucana. Whenever the valley broadens out there is a town, as at the breakfast station, Matucana, which at an altitude of 7788 feet affords a meal of several courses at the price of one *sol*. The hotel furnishes comfortable accommodations for those who think it wiser to take the climb in instalments, or for any with archæological tastes who may like to investigate some ruins a few miles down the valley on an eminence rising from the north side of the river. The excursion may be made from Matucana in a long day on horseback with a good horse and guide, even on foot by one so inclined. The remains are of especial interest on account of a theory that they are relics of a Pygmy City; that the little people once its inhabitants were expelled by ruthless invaders and fled over the mountains into the Amazon basin. Fortifications, house walls, and subterranean chambers still exist, the small size of the rooms, the doorways three feet high, being adduced as evidence in favor of the little people. Others believe the ruins are those of an ordinary ancient fortress.

Beyond Matucana the scenery becomes still grander. The walls above sometimes look dangerous with overhanging rocks, or with boulders half out of a steep earth slope, appearing just

ready to roll down. Slides occasionally occur, especially in the rainy season, but accidents are rare; for going up it is easy to make a sudden pause, and coming down a hand-car goes ahead of passenger trains to make sure that the track is clear. Bridges and tunnels are the order of the day, gorges and cliffs, at last, shining mountains. The Gorge of Infernillo (Little Hell), black and deep, you are whisked across in a moment, and from one tunnel into another. Tamboraque, the first small mining town, is really in the Sierra. Rio Blanco and Casapalca farther on are important smelting centers, the last above 13,000 feet. Long before this it has grown cold and wraps are in order, furs perchance not amiss, good woolen underwear desirable. Chila, a considerable place, reached before Casapalca, is notable for having five parallel tracks one above another, curves, tunnels, and two V's being required to climb, by three miles of track, 500 feet in a short distance up the valley. At Ticlio there may be a chance for tea. One venturing from the car should here step slowly and carefully if he would avoid a slight ringing in the ears. One not feeling perfectly well is wiser to let some one else bring the tea. A bottle of salts of ammonia should be at hand in case of headache or vertigo, and fresh air may be desirable. A short stop is made just before entering the Galera Tunnel, 4000 feet long. On the right at the entrance of the tunnel is a rounded brown hill top, Monte Meiggs, often without snow though 17,575 feet above the sea. This altitude is confused by many with that of the railroad, about 2000 feet lower; for which the manner of printing the time-table may be responsible. East of the continental divide the fine snow peaks and glaciers are in striking contrast to the bareness in the dry season on the coast side. Beyond the snow mountains, the scenery diminishes in grandeur to *Oroya*, 12,050 feet, where the train is now due about 3.30. An observation car is greatly to be desired on this ride. If the conductor can be persuaded to let you stand on the rear platform of the last car, this on a regular train is the best position available. An open freight car now affords the finest possible outlook, but most persons will prefer a more comfortable seat with diminished view. From the station Ticlio, altitude 15,665 feet, the highest point on the main road, there is a



ON THE OROYA RAILWAY



short branch line to the mining town Morococha, beautifully situated among lakes and glaciers, this branch crossing the divide at 15,865 feet, a trifle higher than Mont Blanc, and absolutely the highest point in the world now reached by rail. The grandeur of the varied scenes on the wonderful Oroya Railway baffles all description and must be seen to be realized in the smallest degree. For those who are unable to devote the two days necessary to enjoy the entire trip, it is sometimes possible to make a Sunday excursion part way up the valley to Rio Blanco, 20 miles above Matucana, returning the same afternoon; much better than nothing, but with a loss of the more splendid scenes above. At Oroya there are two hotels, the *Junín* and the *Grand*, with little to choose between them. No luxuries are provided; a fair dinner, a bed, and morning coffee are supplied; but more fortunate are those who have friends at court and are entertained by some of the railway officials. At Oroya one may have his first sight of llamas, the ancient burden bearers of Peru, dignified, graceful animals, when moving with their ordinary slow walk, but not when startled into a run. Be cautious about making free with them, as if they resent your advances they are liable to spit in your face, though they do not look as if they could be so rude.

Those who are making the South American Tour in a leisurely manner, or who have an eye to business, may not pause at Oroya, but changing cars may continue north the same day to Cerro de Pasco, or after a night in Oroya may pursue the railroad journey southward to Huancayo, or may on horseback go over another mountain range, then down, down, to Tarma, La Merced, and the *montaña* country.

Cerro de Pasco is reached by a journey of about 90 miles over a generally hilly or rolling country, with few high mountains visible and those afar off. Lake Junín is passed before dark, a resort of ducks and other wild fowl, hence a field of sport for those fond of game. Here, be it remembered, was the next to the last battle of the War of Independence; and the soldiers in those days did not come up in cars either. Indians abound at the stations along the road, Quichuas, differing little from their ancestors of 400 years ago. The town of Cerro is reached about 9.30 p. m., but as a dining car

is attached to the train one is well fed at a seasonable hour. The best if not the only hotel in the place is the *Universo* on the main plaza of the town, to which the stranger will need a guide, as the station is on the outskirts of the old city. The hotel is not much to boast of, but the night I spent there was perfectly comfortable. Again, if one has friends at court among the officials of the Mining Company he is lucky, but naturally they cannot entertain all tourists. The place is of exceptional interest as one of the highest mining camps of any size, and the highest town of any importance in the world. There are at least 8000 people here at an altitude of about 14,300 feet. The *Cerro de Pasco Mining Company*, composed of half a dozen or more well known American millionaires, has spent it is said towards \$30,000,000 in the purchase and development of property here and at Morococha, in building the railway from Oroya, in erecting a large smelting plant nine miles from Cerro with buildings for employees, on coal mines, and on other things essential to a great property. In earlier days these mines were worked for silver, but now copper is the chief production. Recently an average of 400,000 lbs. 98 per cent pure has been turned out from the smelter each month. The privilege of visiting the mines is accorded to few, but all may observe the great open pits resembling quarries, several hundred feet deep, where the surface, undermined years ago by great tunnels and chambers, at last caved in. The titanic forces of nature by some mighty effort here cast upward a wonderful mass of minerals, gold, silver, copper, etc., not in veins, but in chunks. This has been called the richest copper deposit in the world, but others dispute the claim. Vanadium is one of the various minerals found not far away. The town with its many Indians, Peruvians, and Americans is a curious place on this great plateau from 50 to 100 miles wide, a plateau diversified by hills, fringed by distant mountains, and cut by occasional cañons, from which fruit and vegetables are brought for the sustenance of the dwellers above. It is possible to go on by train from Cerro to Goyllarisquisga, 26 miles farther, on the edge of a cañon commanding a fine view of the great mountain, La Viuda, believed by some to exceed Aconcagua in height. A concession has recently been granted by the Peru-

vian Government to Mr. Alfred McCune, now transferred to the Amazon Pacific Co., to build a railroad from Goyllarisquisga, down to Puca Alpa on the Ucayali River, a point four days from Iquitos. Operations have commenced. An immense amount of rich territory will be opened up by this road, fine grazing and agricultural lands, and rubber country below. Ultimately the town Goyllarisquisga will be connected by rail with Recuay, the entire line from Oroya forming a link in the Pan American railroad. From Cerro or the Smelter, a three days' horseback ride would bring one to Lake Santa Ana, the source of the Marañon or Amazon. A mile or two below the Smelter is a valuable silver mine and smelter in operation, property of Señor Fernandini.

Huancayo. The trip from Oroya south to Huancayo is through a valley of somewhat lower elevation, hence of more cheerful character. The town of Jauja on this line is considered an excellent place for consumptives, for whom the coast is much too damp. Huancayo, 78 miles from Oroya, is now the terminus, but work has been pushed for 20 miles farther and ere long Ayacucho will be reached, the scene of the final battle, compelling the withdrawal of the Spaniards.

Tarma. The expedition to Tarma and the *montaña* may attract a few who can spare a week or ten days for this delightful trip. Animals to Tarma may be obtained at Oroya for 5 or 6 *soles* each. With saddle-bags, no baggage animals are needed. It is well to set out from Oroya by 9 a. m., in order to pass over the *cumbre* before the afternoon breeze begins to blow and to arrive in good season at Tarma, a pretty town at an altitude of about 10,000 feet. There are two hotels where lodging may be had at modest prices, and at the Umberto horses may be engaged for the ride to La Merced. Luncheon must be taken from Oroya, but beyond Tarma there are places on the road where it may be procured. On the *cumbre* 2000 feet above Oroya, all is brown and bare, but at the farther edge of the broad pass there is a fine view of distant mountains and valleys. Not far down, green will appear, presently a house or two, a pretty stream, a few calla lilies. From Tarma onward there are plenty of trees, growing as it were of their own accord, a pleasing change from the plateau and the western side. The next day

luncheon is at Palca, and before night one should reach Huacapistana, 40 kms., a delightful spot. The third day one has luncheon at San Ramón and spends the night at La Merced, 35 kms., which with an altitude of less than 3000 feet is really in the tropical country. The delights of this journey, the beautiful cañon lined with verdure, is a contrast indeed to the bare sublimity of the other side. The road is excellent except in one place between Oroya and Tarma. There are romantic tunnels, fine suspension bridges, swinging, but that does no harm and may afford a novel experience. This road is now the highway from Lima to the Atlantic by way of Iquitos, and at the moment it is probably the most comfortable route to cross the center of the continent. With good luck the journey from Lima to Iquitos may be made in 16 days, nine of these on horseback from Oroya to Puerto Jessup, one day by canoe to Puerto Bermudez, thence in five or six days by steam launch to Iquitos. At this city of 15,000 people a larger boat may be taken for Pará or New York. But that is another story. By way of Cerro de Pasco and Huánuco, the journey from Lima to Iquitos is ten days. A few hours beyond La Merced is the Perené coffee plantation belonging to the Peruvian Corporation. In this section land is cheap, and with the mercury always in the eighties, one so inclined may be happy, leading the simple life. The Indians about here are fine looking, whiter than many of the Spanish, and are quiet, peaceful people; though others beyond are so fierce that it is unsafe to pass through their territory. Having been ill-treated by white rubber gatherers and some other so-called civilized men, they allow no whites among them.

CHAPTER XI

THE SOUTHERN RAILWAY—AREQUIPA

FROM the charm of the Rimac Valley and the City of the Kings it is difficult to escape, but on a four months' tour not more than ten days can be spared for this region, fourteen at the outside. To Mollendo, the next place of debarkation, the voyage may be pursued by any one of the three lines of steamers previously mentioned. If a through ticket to this port or to Valparaiso has not been purchased, one may elect to go on one of the Kosmos boats, a very comfortable German Line which in 1911 afforded an especial advantage to tourists with heavy baggage, going up to Bolivia. These boats lie over two weeks at Antofagasta, taking on freight at near-by ports; so that leaving one's heavy baggage on board, one may make the trip from Mollendo to Arequipa, Cuzco, and La Paz, re-joining the same ship at Antofagasta two weeks and three days from the time of going ashore at Mollendo. Persons patronizing any of the three lines from Panama, may by especial arrangement with the purser have their baggage checked through to Valparaiso, to reclaim it at the Custom House there when they arrive.

The express steamers south from Callao arrive at Mollendo on the second morning after sailing. As the daily train for Arequipa leaves at 1.30 p. m. there is ample time to disembark, have the baggage examined, take breakfast, *almuerzo*, price one *sol*, at the Hotel Ferrocarril just above the railway station, and perhaps look about a little before going aboard the train. A through ticket, price 40 *soles*, to La Paz should be purchased, as this saves considerable bother, permits stopping off at Arequipa, and for the trip to Cuzco at Juliaca, and saves a trifle over the local tickets. All hand baggage may be taken into the car without charge, but there is a heavy tariff on trunks or anything that is checked, so much so that two heavy trunks will approximate the cost of one ticket.

Most persons will be able to manage with hand luggage only, not forgetting, however, that wraps and warm clothing will be needed on the plateau above.

Mollendo is a busy port, in Peru second to Callao in commerce, though far behind in other ways. It has really no harbor at all, in spite of a small breakwater recently built; the rollers and surf often look a bit awesome and the barrel is frequently called into requisition. Rarely the sea is so rough that passengers are carried on to the next port, whence they may return at their own expense. Seven or eight miles north is an excellent quiet haven, among the best on the Pacific, Matárani, to which there is much talk of transferring the port, especially since most of the business portion of Mollendo was destroyed by fire, April 2, 1912. From the Matárani Bay the railroad journey would be nearly twenty miles shorter and the ascent to the top of the bluffs would have a one per cent lower grade. It is hoped that the transfer will not long be delayed.

The tariff for disembarking at Mollendo is higher than at other ports, four-oared boats being generally used. For one passenger it is S.1; if there are more than three in one boat, 60 *ctvs.* each: children under twelve, 30 *ctvs.* Parcels of ordinary size or small trunks are 50 *ctvs.* each to the mole, and as much more to the station: large trunks 70 *ctvs.* and 60 more to station. With much baggage for several passengers a bargain for the whole may be made. The boatmen are liable to ask double what it is worth or what they are willing to accept. Peruvians generally pay one-half or one-third as much as strangers.

Mollendo is not an attractive place, between May and November subject to a fine mist or drizzle, and having little sunshine. It is, nevertheless, a health resort, but the most melancholy one it was ever my lot to visit. Yet many persons are benefited by coming from the greater altitudes of Arequipa and La Paz, even though the place be damp and cheerless. With an hour to spare one may stroll around the town or along the beach where the waves are rolling in from Australia or other remote region, or may climb the rocky promontory to watch the high breaking surf.

After leaving the station the train for several miles hugs the sandy shore, then turning away soon begins to climb the bluff, here about 3000 feet high. The face is irregular with steep slopes cut by many cañons. The road winds along up one of these, then on the face of a projecting slope, the car having first one side toward the sea, then the other, and heading in turn towards all points of the compass. At *Tambo Station* about 1000 feet up, there is a pretty view down into the *Tambo Valley*, its level floor green with sugar-cane and other agricultural products. Women from below stand by the car windows with fruit and other edibles to sell. The ever changing prospect is a continual source of pleasure, especially near the close of the wet season, when the upper half of the slopes is quite green, mostly with bushes of heliotrope all in blossom. At other times there is only sand, not a particle of verdure, but many black sticks, some day to be rejuvenated into glowing life. It is a long and devious way to the edge of the plateau, where a sudden change is experienced. The green if any is left behind, a sandy desert is before, though the dampness, in the winter, continues. The gradual change from the gray mist to the bright desert sunshine if observed is most interesting, and then to look backward upon the gray cloud from which you have emerged. Here, perhaps, you have your first view of an absolute desert; no wells are useful, and for the stations along the track, even for *Mollendo* itself, water is piped down from near *Arequipa*, 100 miles distant. The plateau is covered with deep yellow sand and scattering stones, some as black as coal. Here is the desert you have dreamed of: no sage-brush, no blade of grass relieves the burning sand. Not that the sand burns here, but in some sections it is hot indeed. The monotony is relieved by graceful gray sand dunes from three to twenty feet high, crescent-shaped, moving slowly along at the rate of sixty feet a year. In the distance are variegated hills, gray, red, yellow, brown, and white, and the great mountains, *El Misti* and *Chachani*, with snow caps varying in dimensions according to the time of the year and the character of the season, *Pichu-Pichu*, a long range slightly lower. Some of the stations have a glint of green, a small oasis in

the desert, others not a sign of verdure. Vitor is quite a little place with a hotel kept by an ancient Belgian, a neat, comfortable little establishment, used as a health resort for persons with weak hearts, for whom Arequipa is too high or Molendo too damp. It is a starting point for those who would ride across the desert to the Vitor Cañon close by, the Sihuas Cañon beyond, and the Majes Valley still more remote, at the head of which Mt. Coropuna, 21,000 feet, is situated; ascended for the first time, July 16, 1911, by Miss Annie S. Peek and party. A railway is soon to be constructed between Vitor and the Majes Valley, which will open for increased traffic a fine agricultural and mineral section, the products of which are now brought by trains of burros across the desert. A little above Vitor the train enters the hills and presently passes along the edge of the fine Vitor Cañon, the floor of which is 500 or 1000 feet below. Trains of llamas may be seen, ancient ruins, a suburban town, Tingo, then if darkness has not fallen comes an enchanting view of Arequipa on the verdant slope of the great volcano El Misti, with Chachani and Pichu-Pichu also in the background.

AREQUIPA

HOTELS. Morosini Parodi, Grand Hotel Central, Royal Hotel, Hotel Europe.

At the bustling railway station, at the car windows, if not within, boys and men will appear who wish to seize your baggage and carry it to the trams. Hotel runners perhaps have previously entered the car. Behind the station a long row of tram cars drawn by little mules was formerly found, already probably superseded by the promised electrics. Before taking a car decision should be made as to what hotel will be patronized. The Morosini Parodi is by many called the best, but I was never so fortunate as to find there a vacant room. Their table is particularly commended; the main building containing the restaurant Venezia is on the west side of the Plaza de Armas, and there are several annexes. The Grand Hotel Central and the Royal Hotel, the first on the left, the second on the right of the calle Mercaderes a block or two from the Cathedral and Plaza are



ON THE SOUTHERN RAILWAY OF PERU



RELIGIOUS PROCESSION, EL MISTI AT THE RIGHT

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both fairly comfortable with perhaps a slight preference for the former, where electric lights and bells are in service and hot and cold baths announced, which does not mean private baths en suite. None of those will be found, so far as I am aware, after leaving the Maury until you arrive at Buenos Aires. From some of the upper rooms of the Central a fine view of Misti may be enjoyed. The prices at all three hotels range from four to six *soles* per day, according to room and bargaining ability. This includes everything but bath, which is with difficulty had at all. Hotel Europe, 67 Mercaderes, serves coffee and supper only. A block or two from the station is a clean and respectable hotel of lower price, convenient for one leaving by the early morning train; but for the few days desirable here, one of the hotels in the center of the city about a mile from the station is to be preferred.

Arequipa, at an altitude of 7549 feet (we are still within the tropics), has by day a climate of perennial June, by night one of October or November. The evening air in winter is chilly enough to make many men, even natives, wear a light overcoat and some ladies, furs; at the same time others appear on the street in thin summer clothing. The city, the second in Peru in size and in commercial importance, has a population of about 40,000. It was founded in 1540 by the Spaniards, though there was a pre-existing Indian settlement, a natural location on account of an ample water supply from the river Chili. A garden has been made here in the midst of the desert, in a spot sheltered from winds by the mountains, enjoying a delightful climate, and a very beautiful prospect.

Sight-seeing begins with the principal plaza which has the *Cathedral* on one side, and on the other three the finest stone *portales* in South America. Behind these are many of the principal shops, dry goods, confectioners', etc. The Cathedral is a fine structure, with an interior more imposing than the outside view. Begun in 1612, it was constructed with great elaboration and contained many costly treasures. These with the interior were largely destroyed by fire in 1844. The rebuilding which consumed twenty years was hardly over when the great earthquake of 1868 occurred. Fortunately the work was too substantial to be overthrown. Splendid columns sup-

port the great arches of the three naves, producing an effect unusually noble and impressive. From the lower side of the Plaza, in the wonderfully clear atmosphere, the beautiful cone-shaped Misti presents an admirable picture with Chachani a trifle higher on the left and Pichu-Pichu a little lower on the right, in the moonlight a scene of rare loveliness.

Other noteworthy churches are those of *Santo Domingo*, and the Jesuits', the latter, *La Compañía*, near a lower corner of the Plaza, having a noticeable carved stone façade and, an uncommon feature, an altar in the open air. The people are noted for their culture and for their devotion to the church, the city having the reputation of being the most bigoted in South America, a reputation shared by several others. There is no objection to one's practicing his own religion in an inconspicuous manner, but there has been serious opposition to proselyting. Nevertheless, the Evangelical Mission of England is now carrying on a work, especially among the Indians, in which personal hygiene and sanitary modes of life are taught in connection with moral and religious instruction, with less friction on the part of the higher classes than formerly.

The fine new *Public Market* occupying a whole square, about two and a half acres, deserves a visit. The building which cost \$280,000 is of a pink and white volcanic stone locally called *sillar*, with a roof of corrugated iron arranged to give good ventilation. At the four corners are four buildings, one a hotel and restaurant, the other three for storage of surplus stocks of fish, meat, and vegetables.

Some tourists may like to visit the splendid new hospital of Arequipa, called the finest of its kind in South America, named after the Goyeneche family, Arequipanians now resident in Paris, who have devoted the sum of \$625,000 to the buildings and their equipment. The grounds embrace about eight acres of gently sloping land, with the main entrance at the head of a broad avenue. In front of the gate is a beautiful Gothic chapel, with Gothic administration buildings at each side of the entrance. Beyond the chapel are the wards, the men's on the left including a military section; the women's on the right, together with the residence for the nurses, who are Sisters of Charity. There are especial apartments for

paying patients, with and without baths. Also there is a hydro-therapeutic building equipped for every sort of bath, available for use by outsiders: operating rooms, kitchen, laundry, morgue, disinfecting stoves, electric lights, and ample water supply. All the buildings are of stone, well ventilated, and a fine clock adorns a tower. The hospital was inaugurated January 20, 1912.

The *Garden of Señor Leopoldo Lucioni* is a picturesque spot to be visited by every stranger. Vine-covered walls, arbors of grapes, heavily laden fruit trees, an avenue of fine cedars, flower-bordered walks, roses, and carnations adorn the place; almost every variety of fruit and vegetable seems to grow in this delightful climate, and plants, seeds, and cuttings are yearly sent by the owner to European, and to other South American cities. Planted by the owner 26 years ago, it is now one of the attractions and benefactions of Arequipa.

Near the city, about two miles from the center, is a spot which is a strong reminder of home, the name Harvard being familiar to every American. This is the Observatory, one of the most important and best equipped in South America, established here in 1891 after considerable study of various locations along the West Coast in search of a site both fairly accessible and favored with clear skies. In addition to various other instruments there is a 24-inch Bruce photographic doublet, the largest and most powerful of the kind in the world, and a 13-inch Boyden telescope, which may be used for either visual or photographic work. More than 100,000 photographs of the Southern Heavens here made are now in the Harvard Observatory at Cambridge, many new stars have been discovered and magnitudes determined. Meteorological observations are taken twice daily, and were made for some years in other places, the most notable, on the summit of El Misti, 19,200 feet, the greatest altitude where a long series of observations has ever been recorded. The dwelling of the Director is a very homelike structure, from the veranda of which there is a beautiful view of Misti close at hand, of Chachani a little more distant, and over the city of Arequipa and the great desert beyond. Visitors are welcome in the afternoon, but the evenings are devoted to work.

Six miles beyond the Observatory, following the Chili river,

is the Power Station of the Electric Society of Lima, a pleasant ride; but in the plant, only the specialist would have great interest.

Ascent of Misti, 19,200 feet. A unique possibility which may appeal to a few, to those who say that they like to climb mountains as far as they can ride, is presented by the beautiful Misti. For, years ago, when observations were to be made on the summit, a road was constructed, *i. e.*, a narrow bridle path, to the very top of the mountain, and a stone hut was erected at about the altitude of the summit of Mont Blanc, where the observers might pass the night on the way. While it may not *look* very distant, the top of the mountain is 11 miles in a straight line from the Harvard Observatory, and 39 miles around by the road, which from there makes the complete circuit of the mountain before reaching the top. One desirous of making the trip should consult the Director of the Observatory, which may be done by telephone, to know if Francisco is available as guide and if he can provide mules. Having made the ascent more than 100 times Francisco may be relied upon. He may charge S.8 for each animal and as much more for himself, or he may have doubled his prices within the last ten years. He may indeed be dead, in which case probably there is another who may serve. Setting out by eight o'clock, with plenty of wraps and provisions, one will not be likely to arrive at the M. B. hut much before dark. The way goes to the right of the mountain up to the Plateau of the Bones, 13,300 feet, between Misti and Pichu-Pichu, where passed the ancient highway to Cuzco and Bolivia; then it turns directly towards the summit, to the M. B. hut at an altitude of 15,700 feet. One sleeps on the floor if at all. Some persons are here so affected with headache, fever, and nausea, the usual symptoms of *soroche*, mountain sickness, that they are unable to proceed. But if not too badly off, one with good grit is likely to feel better by day, and in the fresh morning air may pursue the journey. Some persons suffer no inconvenience whatever. One should set out for the summit by daylight, as the ascent requires four hours or more and it is a long way down to the city. From the summit there is a splendid prospect of mountains near and remote, of the beautiful city and green valley just below, and of the desert stretch-

ing away to the ocean, which, alas! however clear the surrounding atmosphere, is likely to be hidden from view by the almost perpetual cloud of mist which overhangs the shore. Still more striking is the view of the great crater at one's feet, a gulf half a mile in diameter and 800 feet deep, enclosed by almost vertical walls. In 1903 a lower cross wall separated the old from the new crater and it was possible at one point to the right to descend to the bottom of the former, climb up the cross wall and look down into the new crater, which was smoking slightly; then to continue along this wall to the edge of the crater above the M. B. hut, and to slip and slide down thither. Some changes have occurred in the crater since then and doubtless most persons will be satisfied with reaching the summit. Nowhere else in the world can so great an altitude be so easily attained: Misti is 5000 feet higher than Pike's Peak and surpasses every mountain in North America save Mt. McKinley, possibly Mt. Logan. If the season has been unusually stormy and the mountain has a considerable covering of snow, the ascent on muleback might be impracticable. In 1903 there was but a small patch of snow on one side and not the slightest difficulty. The reason for the lack of snow at this altitude, when it is found on other mountains in Peru much lower down, is the slight precipitation which here occurs, varying with the year but always less than on most other mountains. No real eruption from this volcano has occurred since the Spaniards in 1549 founded the city, but El Misti is somehow held in a measure responsible for the earthquakes which from time to time have devastated the city, and the affectionate admiration with which the mountain is regarded is not unmixed with awe. Hence the two crosses which have been erected on the summit, standing near the little shelters for the Observatory instruments. Those of a self-registering character here placed were for a year or two read by an observer, not always the same person, who came up every two weeks. The effects of the severe earthquake of 1868 are still visible in the city. Slight shocks are common. For this reason dwellings of a single story are generally preferred, and few buildings have more than two.

Not far from Arequipa, as is natural in a volcanic region, are springs of great reputation. One situated about a league

from the city produces an excellent table water, called the *Agua de Jesus* or *de Misti*, highly recommended for general use, good also for several ailments. It is a pleasant ride with a fine prospect all along the way, and with opportunity at the end for a bath in a clear, effervescent pool, where the water, charged with carbonic acid gas, rising from the gravel floor, seems to have a highly exhilarating effect.

In the opposite direction, 15 miles from Arequipa near the railway leading to Puno, are the *Baths of Yura*, a watering place of growing fame, with baths of sulphur and of iron. These may be enjoyed free of charge, as the Government has erected suitable buildings over the various springs; though in order to profit by them, unless camping out, one must pay a moderate board at one of the neighboring hotels. The *Gran Hotel de las Termas*, in a pretty garden, supplies comfortable quarters and food (bathing suits, etc.), at S. 2.50 a day. The waters are said to cure stomach troubles, skin diseases, rheumatism, etc.

CHAPTER XII

THE SOUTHERN RAILWAY—CUZCO

A TRI-WEEKLY train is now scheduled from Arequipa up over the mountains, Monday, Wednesday, and Friday; the Wednesday only connects with an express to Cuzco. These trains, are provided with buffet chair cars, which make the long journey less wearisome. Persons who have suffered *slight* inconvenience on the trip to Oroya need not fear a repetition of unpleasant symptoms on this journey, the stay of a few days at Arequipa making the change in atmospheric pressure more gradual; also a second experience is generally less trying, and the top of the southern pass, 14,666 feet, is 1000 feet lower than that on the Central Railroad.

The scenery between Arequipa and Juliaca presents far less of grandeur than is witnessed on the Oroya road, though for a time it should keep the attention. The white city with the deep green of the Chili Valley, and graceful Misti with its more rugged sisters on either hand, for a half hour form a delightful picture, as the track winds along down, and later begins to climb around the other end of Chachani. The dry and channeled slopes of this mountain, the desert of volcanic sand and lava rock for a while may interest, but there is a good deal of sameness to the view, somewhat enlivened by two distant splendid snowclad *massifs*, Amfato and Coropuna.

The *Baths of Yura*, an hour from Arequipa, are invisible from its station: a glimpse of the green cañon may be had later. Presently Chachani and Misti are seen from the rear, appearing considerably lower from the increased elevation. On the Pampa de Arrieros, a bleak, grass-covered plateau, the highest point of the divide is passed at Crucero Alto. Beyond is the breakfast station, Lagunillas, near which among the graceful rounded hills are two romantic lakes, Saracocha, and Cachipascana, one on each side of the track. In spite of

these and the lines of beauty in the contour of the hills, the plateau is rather dreary: to live happily at any of these stations, one must needs be a true lover of solitude. With good fortune one may descry in the distance a few vicuñas, cousin to the llama, but with much finer wool, often called fur, of a tawny shade, as light in weight as chinchilla; perhaps a drove of the almost equally rare alpacas; the former in a wild state, the latter under care and cultivation.

Juliaca, the junction, is a busy place, always thronged with Indians and a scattering of white people. From here to Puno the train is generally crowded; but if on the way to Cuzco, you will not mind, as this is the junction where the roads divide. Probably you must descend here to spend the night. Passing through the station on the right of the track, you will find a plaza, on the left side of which is a hotel providing clean beds and enough to eat, with no display of elegance. The next morning at 9.15 you may set out for Cuzco, if Thursday arriving there at 7.40 p. m. If Tuesday or Saturday it will be necessary to spend a night at Sicuani, the journey by slow train consuming two days.

At Juliaca are many men and women, venders of a great variety of foods and of merchandise. Many others will be seen at the stations on the road to Cuzco, women wearing odd stiff hats, flat as the proverbial pancake, short skirts, and shawls, men with short trousers and ponchos. Pottery in curious shapes, jars, water bottles, and ornaments may be purchased, match safes, tooth-pick holders, etc. The Indians are industrious, generally occupied with spinning, even while walking and carrying on the back heavy burdens.

Tirapata, where there may be a pause of twenty minutes for breakfast, is a place of considerable importance, headquarters for the Inca Mining and Rubber Companies, where their wagon road begins towards the Santo Domingo gold mines, their mining property at an altitude of 7000 feet, and their rubber lands beyond. Eight thousand acres of land were presented by the Government to this company for every mile of road opened to traffic; and one was made across the plateau northeasterly, as far as the mountains. Over the Aricoma Pass, 16,500 feet, and down the steep slopes through ravines and gorges on the other side, a trail for mules is still the only pathway. Recently a

concession has been granted to the Peruvian Corporation to build a railroad from Tirapata or from Urcos to navigation on the Madre de Dios, not to really deep water, but to a point accessible to boats of two feet draught, perhaps at Tahuantinsuyo. This is likely to be the third or fourth important route across Peru from the Pacific to navigation on a tributary of the Amazon.

La Raya, the highest point between Juliaca and Cuzco, with an altitude of 14,150 feet, is on the dividing line of the watershed between the Amazon system and that of Lake Titicaca. Here is the knot of *Vilcanota* where the Coast and the Eastern Cordilleras unite, and where the sacred river, Vilcamayu, takes its origin in a little sacred lake lying at the foot of a snowy peak visible from Cuzco. Now, leaving the bleak plateau region, the train descends the Vilcamayu Valley to a milder region.

Sicuani, 2500 feet below, the most important place along the road, was for some years the terminus of the railway line. It boasts therefore of a good hotel, the Lafayette. Here the night was formerly spent, the remainder of the journey to Cuzco being by diligence, certainly an advantage as far as enjoying the scenery is concerned. The Sicuani market place is noted for its extraordinarily picturesque appearance, the Indians coming for miles around to make their purchases, largely by barter. Journeying by accommodation train, which has some advantages, one spends the night here and arrives the next afternoon in Cuzco.

The train passes many historic sites and ancient ruins, just out of view the famed Lake Urcos into which, the story goes, was thrown the wonderful gold chain of the Prince Huascar. This was said to be long enough to encircle the great plaza of Cuzco, with each link weighing 100 lbs. Projects have been formed to drain this lake in the hope of finding here much ancient treasure, but though small the lake is very deep and no real effort has been made.

CUZCO

At last the railroad leaves the main valley to follow up a tributary on the left, the Huatanay. At the head of this side valley, it reaches the ancient city of Cuzco, once the

metropolis of a vast realm surpassed in extent or in wealth by few in the world's history, probably equaled by none in the number of people living, contented and peaceful, under a single sway.

From the station half a mile from the center of the city, an attractive boulevard is being laid out, on which a tram car runs to the central plaza, or by this time electric. Carriages too may serve and boys are eager to carry hand baggage. The hotels, alas! leave much to be desired. Slow, indeed, are the people to realize the necessities which *must* be supplied if the town is to advance, to attract tourists and business men. The residents have not seemed to care whether there was progress or not, but the Central Government is interested, the Prefect who comes from Lima is endeavoring to work a revolution, and the cultivated inhabitants have begun to realize their condition and to remedy the evils which have long been a reproach.

The Hotel Comercio may be endured for a night or two, since it is in a very worthy cause. The other hotel, the *Royal*, is no better. Another, the *Central*, is spoken of, opposite the church, La Merced. One does not go to Cuzco for the luxuries of New York or Paris, but if unhappy without these he must postpone this part of the journey a while longer. One writer says that the Comercio affords reasonably good meals and decent bedrooms. Other opinions are less favorable, but conditions may have improved by now. On the spur of a hill which closes the head of the valley, at an altitude of 11,500 feet, is situated the ancient imperial city. Some knowledge of the history of its rulers, the greatness of its domain, the development of its civilization, the magnificence of its temples, the power and riches of its princes, and the terrible tragedy of their downfall gives a keener interest to the massive ruins, the delightful prospect, and to everything in this remote valley which is connected with the unique and wonderful empire of world-wide and immortal fame. At the time of its capture, four centuries ago, few if any cities in the world could rival Cuzco in the magnificence of its temples, and their treasures of gold and silver, and none in the massive fortifications and other constructions of which the remains are still a marvel.

In the history of this ancient city there are at least four periods:

the prae-Inca age; the glorious epoch of the Inca dynasty; the merciless, mournful days of bloodshed and destruction, followed by the brilliant reconstruction and the relentless rule of the Spanish invaders; and the slow progress of the modern republic. From the earliest period date the megalithic ruins of Sacsahuaman and elsewhere, regarded as belonging to the same age as those of Tiahuanaco and a few other places, their origin alike involved in mystery. Sir Clements Markham, the most careful student of this early civilization, believes it to be an indigenous growth of great antiquity, though there is a tradition of an early outside influence from the south.

The great empire of the Incas was of comparatively short duration; according to commonly accepted tradition, it existed for about four centuries. The most current and approved legend of the Incas' origin is that they were the children of the Sun, who pitying the sad condition of his creatures sent to their aid two of his offspring, Manco Ccapac and Mama Oella, brother and sister, also husband and wife. These first appearing on the Island of the Sun in Lake Titicaca thence came to Cuzco and established their dominion. Manco seems to have been a great and wise ruler, probably of Quichua origin, and to have lived in the twelfth century. His successor Sinchi Rocca was a peaceful ruler, but the third Inca, Lloque Yupanqui, subjugated some of the neighboring peoples. The fourth, Maita Ccapac, was a greater warrior, extending his kingdom over most of Bolivia, and to Arequipa and Moquegua. The fifth Inca, Ccapac Yupanqui, who was called avaricious, employed his reign in subduing insurrections in regions already conquered. His successor, Inca Rocca, was an eminent warrior and statesman, who built great palaces, founded schools for the education of the nobility, and made strict laws for the welfare and protection of the people, with severe punishment, even death, to murderers, incendiaries, and thieves.

The seventh Inca, Titu Cusi Hualpa, was less successful. An invasion by the tribes of Chinchasuyo caused him to flee in alarm, but his son, collecting an army, defeated the invaders and was then crowned, with the name of Viracocha. During his reign eleven provinces were added to the empire, and a magnificent temple was erected twenty miles south of Cuzco with an altar to Viracocha, a deity who had appeared to the prince to warn him of the coming invasion, informing him that *he* was the creator of man, the world, the sun, and all else. A remarkable engineering feat of this reign was the construction of an irrigating canal nearly four hundred miles long and twelve feet deep to convert some plains below into green pasture lands. The eldest son of Viracocha, who was of small account, was presently succeeded by his brother Pachacutec who brought

still greater glory to the empire. With the excellent armies organized by Pachacutec, his son Tupac-Yupanqui made conquests along the coast from Pisco north including Pachacámac, the realm of the Grand Chimu near Trujillo, and the valley of Cajamarca. These cities were not destroyed, but were left under the dominion of their former rulers as vassals to the Inca, the worship of the Sun being associated with their former religion; but the learning and use of the Quichua language was made compulsory. Every government official and soldier was obliged to speak this language.

After the death of Pachacutec at the age of eighty, his son Tupac Yupanqui, the tenth Inca, conquered Chile as far as the Maule River and spent three years in a tour to the various parts of his empire. Some uncertainty exists about an Inca Yupanqui, but a younger son of Tupac called Huayna-Ccapac, near the close of his father's reign, carried still farther the conquests even to Quito, which he won from its king. His reign was one of wisdom until its close. The rightful heir Huascar, son of the Coya or Queen, had a rival in his father's affections, a younger son, Atahualpa, of another, Pacha. Having himself retired to Quito before his death, Huayna Ccapac left that province to his son Atahualpa, and the throne of Cuzco to Huascar. Thus happened the division, so disastrous to the Inca dynasty, possibly altering in some measure the whole of Peruvian history.

The location of Cuzco is said to be more beautiful than that of Quito or Bogotá, both of world-wide fame. Rome, Athens, and Sparta, in the opinion of many, present less charming scenes than that which is outspread before the observer on Sacsahuaman. Yet how altered from the days of its glory! Then the hills around, fertilized with guano and small fish and irrigated throughout their entire extent, were terraced and cultivated to their summits. Then the city and its suburbs are said to have contained 400,000 souls. The gates of the walled enclosure were of colored marble. Within were great palaces, their walls painted in bright colors.

The *Temple of the Sun* was covered with a roof of gold. In the gardens around were artificial flowers of gold and silver, figures of animals large and small, wild and domestic, of herbs, plants, and trees; a field of maize, fruit trees, images of men, women, and children. The doors were covered with gold plate. A gold cornice more than a yard deep, around the building, did not remain long in place after the occupation by the Span-

iards. The golden roof had been removed previous to their arrival. This sumptuous temple called Coricancha, Place of Gold, begun by the first Inca, Manco Capac, was not concluded for many generations until the time of Inca Yupanqui, each Inca in the meantime contributing a share towards the completion of the great work. The form of the temple was elliptical, and opposite the entrance where the rays of the rising sun would fall upon it was a gold effigy representing the Sun. Golden rays projected from his head so that the entire creation occupied one side of the temple. When the sun's rays fell upon the figure the effect was indeed dazzling, lighting up the place with such radiance that the Indian Nobles, who alone were permitted to enter, prostrated themselves, striking their foreheads on the pavement. The only women allowed within the temple were the wife and daughters of the ruling Inca. On each side of the deity were arranged the dead mummified bodies of the Incas, clad in royal robes, seated upon golden thrones, with eyes downcast and hands folded across their breasts. One only, Huayna Ccapac, faced the god, one story says because he was the best loved, another, because he dared to gaze at the sun and show that this luminary was not the creative lord.

Beyond this, the chief holy place of the temple, was a rectangular cloister with five square chapels around. One dedicated to the Moon contained a silver image of a woman's face. In this chapel were arranged the bodies of the Queens called Coyas, as were the Incas in the chamber of the Sun. The next hall, its ceiling covered with silver stars, was dedicated to the Stars; the third, adorned with gold, was to Thunder and Lightning. Next came the hall of the Rainbow with colored delineations on gold plate, and finally a hall covered with gold where the priests gave audience. Many jewels, emeralds and turquoise, were set in the mouldings of gold. The bodies of the Incas were removed before the coming of the invaders, but in 1559 five were discovered and subsequently carried to Lima, where they were buried in the patio of the San Andres hospital. Four streets which led to the temple of the Sun are now called Carcel, Loreto, Santa Catalina, and San Agustín.

Near by, where now is the convent of Santa Catalina, was

the House of the Virgins, who, like the Vestals at Rome, fed the sacred fire. Of these there were 1500 or more, some from Cuzco of royal lineage, others from the provinces, selected for their beauty from those of high birth. They spun and wove the clothing of the Inca and his Queen and had various other duties. Their dishes and utensils were of gold. They entered the convent before they were eight years of age and here, vowed to chastity, they spent their lives. This building was 200 by 800 feet.

Each Inca built for himself a great palace, and above were the wonderful fortifications of Sacsahuaman. West of the town is a place called Huaca-puncu, Holy Gate, which is approached by a steep street. At a certain spot every Indian paused to look back or forward, this being the first or last point from which could be seen the Temple of the Sun. And still to-day, as four centuries ago, the Indians continue this ancient custom.

The visitor may first stroll about the modern city, which should occupy him for a day or more, and then turn to the ruins above. A short distance east of the Hotel Comercio is a larger plaza called the *Matríz*, which with the other two, the *Regocijo* and the *San Francisco*, in ancient days formed a huge single plaza, the scene of many great festivals, its periphery the measure of Huascar's gold chain. First to attract observation is the imposing *Cathedral*, regarded as third in splendor in the New World, following those of Mexico and Lima. Begun in 1560, later than that in Lima, it was earlier finished, in 1654. One writer calls it the most perfect example of colonial architecture existing. It has the usual three doors and naves, with two rows of Corinthian columns carved, in front only, to their base. Built of stone in the Renaissance style, the cost of the cathedral was so great that one of the Viceroy's remarked that it would have been less expensive in silver. The choir in the central nave is of superb carving, the high altar in front is covered with silver. Two fine organs provide music. There are many paintings, one attributed to Van Dyck, *El Señor de la Agonia*. Portraits of the Popes and of all the bishops of Cuzco are contained in the sacristy. A monstrance ornamented with diamonds, pearls, rubies, etc., is one of the most valuable possessions.



CATHEDRAL PLAZA, MATRIZ



ANCIENT WALL

THE
LIBRARY
OF THE
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COMPARATIVE ZOOLOGY
AT
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CAMBRIDGE, MASS.

On the right of the Cathedral is the Chapel of the Sacred Heart, on the left, the Chapel of Triumph. In front of the Cathedral which, with the Chapel of Triumph, occupies the site of the palace of Viracocha stood a round tower.

Especial heed should be given to the tone of the Cathedral bell, called one of the richest in the world. It is styled the Maria Angola from the name of a pious lady who presented 300 lbs. weight of gold to be used in its casting. The great bell, which is large enough to cover eight men, was made in Cuzco in 1659, so heavy that an inclined plane was built to hoist it to the tower and many men were required for the task. It is said that the bell may be heard for a distance of 25 miles, and that its rich tones, due to the large amount of gold in its composition, are especially inclined to awaken a spirit of reverence.

On the south side of the Plaza will be noticed the Church of the Compañia, the Jesuits', standing on the site of one of the later Inca palaces, that of Huayna Ccapac, father of Atahualpa and Huascar. This church, one of the finest in Cuzco, is cruciform in shape with a single broad nave and a large dome at the intersection of the transverse aisles. Pillars both round and square support the fine arches of the church.

On the corner of Loreto calle, nearer to the Cathedral, was once the palace of the Inca Yupanqui, some distance back of which was that of Inca Tupac Yupanqui. At the farther corner, also of the south side, was the palace of Huascar beyond the calle de la Carcel which led down to the Temple of the Sun, now built over by the church and convent of Santo Domingo. The church is not so fine as some of the others, but deserves a visit on account of the historical associations, the altar now occupying the position formerly sacred to the Sun god. The exceptional oval wall behind the altar should be noted, indicating the elliptical form of the ancient structure. The cloister has a finely carved stone archway, and columns around a patio of the convent, which was one of the earliest Spanish edifices in Peru.

The convent of Santa Catalina close by is on the site of the ancient House of the Virgins.

On the north side of the Plaza were the palace of the Inca

Rocca, next the Cassama or House of Freezing, the magnificence of which was supposed to stiffen the beholder with admiration, and then the palace of Inca Pachacutec. The walls of the ancient structures were used for the lower floors of Spanish dwellings and a second story with balconies was added above. Here are now houses and shops with arched arcades in front, much as in the time of Garcilasso de la Vega, a boy at the time of the Conquest. The palace of Pachacutec, the Inca legislator, is the residence, according to Fuentes, of C. Gonzales Martinez, calle del Triunfo No. 78. On this street is the famous great stone with twelve angles. At No. 116 on this street, the house of Señora Juana Arinibar, was, says Fuentes, the palace of Yupanqui. Francisco Pizarro once occupied the mansion now the residence of the Prefect; his brother Gonzalo, a house in the *portal* Harinas.

While the great Plaza of Cuzco in the days of the Incas must have been the scene of many joyous, marvellously brilliant and sumptuous festivities, in violent contrast after the Conquest it witnessed the most terrible tragedies. Here in 1571 the youthful Inca, Tupac Amaru, was beheaded in the presence of a vast crowd of Indians. For a moment the hand of the executioner was stayed by the wail of horror that arose, but the ruthless Viceroy Toledo would grant no mercy. The head of Tupac was set up on a pike. In the middle of the night, a Spaniard looking from his window was amazed to see the entire Plaza filled with kneeling Indians, in silent veneration before the last of their rulers. Next day the head was removed and buried. Two hundred years later, in 1781, a greater atrocity was committed. Another of the same name who had led in revolt his kinsmen, suffering from the inhuman exactions of their rulers, was here compelled to witness the torture and execution of his wife and other relatives. Then after having his tongue cut out, he was torn limb from limb by four horses. It is small wonder that the Quichuas appear of a stolid, melancholy disposition.

The church of La Merced should be visited, especially to observe the fine cloister with its admirable arches, columns, and staircase, as also because here are the remains of the old warrior Almagro and the brothers, Juan and Gonzalo Pizarro.

Above the city, slopes toward the north a steep hill between two gorges, the Huatanay on the east and the Tulumayu on the west, crowned with the world renowned fortress of Sacsahuaman. A long half day at the least is needed to investigate this and other ruins above. Many, with a whole day to spare, will find it delightful, setting out early with a luncheon, to linger above until the shadows begin to fall.

One may go on foot or horseback (it may be a mule) according to his taste and ability. An extremely athletic gentleman says the climb is best done on a mule. Certainly it is better for one not fond of walking, but to a good pedestrian the walk is no hardship. Turning to the right on the calle Triunfo one will pass a great wall containing the famous stone with twelve angles into which other stones are beautifully fitted. This method of construction is characteristic. They did not trouble to make rectangular blocks of a fixed size, but utilized stones both large and small of various shapes, and fitted them perfectly to each other. In some cases the joining is so fine that the thinnest knife cannot be inserted. Nor was mortar used in the construction. How their wonderful work was accomplished without tools of steel or other metal remains a mystery. There is a legend that they knew of a plant the juices of which in some magical manner softened the stone so that it could easily be rubbed into the required shape. This great wall perhaps enclosed the palace of Manco Ccapac, the first Inca, of which some remains are above. Still higher, on a terrace back of this palace, was the Garden of the Sun which was yearly the first to be cultivated. Markham calls this the most lovely and the saddest spot in Peru. Beyond the calle Triunfo, to one climbing the hill along the edge of the gorge, scenes of beauty are continually revealed as one pauses to rest and look about him. The great fortress on the hilltop was so difficult of access that in the greater part of its circumference a single wall sufficed; but to the northeast or rear, as regarded from the city, the approach was gradual. On that side for a distance of 330 yards, were constructed three great parallel walls which had 21 advancing and re-entrant angles, so that every point could be enfiladed. These walls, which may be called Cyclopean, are said to contain stones surpassing in size any found in ancient Mykenae or

other Greek strongholds. One of the largest stones weighs about 36 tons. They are of limestone brought from quarries three quarters of a mile away, though other writers state that they came from a distance of 5 and 15 leagues. One 30 feet long is said by one writer to weigh 160 tons. The most perfectly planned fortress ever built is the extraordinary tribute which this work has received. Against what people such a stronghold was required is a mystery. The lowest of the three walls was 27 feet high, the second was 18, and the uppermost 14; on the inside, the parapet was breast high. Between each two walls there was a space of 25 to 30 feet. In each wall near the center was a gate which could be raised. There is a story of a tired stone which was left on the road and wept blood at being unable to reach the fortress. It is related that this stone, being dragged by 20,000 Indians, half in front with stout cables and half behind, slipped back down the hill killing several thousand, and thus it wept blood.

At the top of the hill in a triangular space within the enclosure were three strong towers. The central tower, circular in shape, contained a fountain with water brought from some distance. The walls of the tower were decorated with birds and animals of gold and silver. Here kings were lodged who came to pay a visit. From the parapet the Inca prince, Cahuide, overcome in a final struggle, plunged to his death. The other two towers which were square provided lodgings for soldiers. They had equal space underground with subterranean passages forming a labyrinth for which a skein of wool was needed as a guide. There were no arches, but corbels with long stones laid across. One of these towers was the last to be defended by the Inca subjects against the Spanish. The invaders soon dismantled the colossal Sacahuaman fortress for material to construct their dwellings, perhaps also to impair its strength as a refuge in case of insurrection. Impressive are these great walls, and the ruins beyond in a vast solitude where no habitation is in sight, perhaps no human being. A little plain lies between Sacahuaman and a hill called Rodadero, once partly walled. Here are curious masses of rock which look as if children or older persons had slid over them for ages. Some believe that the white rock solidified in this form, others that the ridges

were artificially cut, and still others that they have been worn as above indicated. Certain it is that youths on feast days or as they have opportunity still take pleasure in the pastime of sliding. A little farther on, carved in the solid rock, is a seat called the Inca's throne, where he may have sat to watch his people at their sports and dances, or to review his troops, or alone in state to contemplate his dominions and the setting sun. Very near is a stone in which there is a channel ten inches wide and over which is a little bridge, thought to be a place of libation. It is said that chicha is thus offered here to-day. Two caves may be seen close by, a small one of labyrinthine character, with entrance three feet high.

Somewhat east of the Rodadero is another rock formation with large double perfectly level stairs with a small landing at the top. By some this is regarded as the true Inca seat. All about, carved in the living rock are niches, benches, and seats of every kind and shape.

From Cuzco a delightful excursion may be made to visit other ruins in the Urubamba Valley, delightful that is to those who do not object to riding on a mule over difficult if not dangerous trails, or sleeping on floor or table, with a rather poor food supply. Temporary discomfort will, however, be most highly rewarded to the lover of romantic scenery as well as to the tourist of archæological tastes. One may go up over the hills back of Cuzco direct to Yucay or to Urubamba, and the next day arrive at Ollantaytambo.

These ruins of Ollantaytambo in the valley of the Urubamba River, at the entrance of a side ravine, have long been known as those of a great fortress or fortified palace arranged on several terraces; the first plateau 300 feet from the floor of the valley. Here are immense stone slabs, polygonal walls with recesses for household gods, a circle or pillar called a Intihuatana for observing the equinox, and other remains in a valley of wonderful beauty. The story of the Tired Stone is also connected with this place. Farther down, about 60 miles northwest of Cuzco, are the still more wonderful remains of Macchu-Pichu, recently brought to the knowledge of the world by Professor Hiram Bingham and described in the April, 1913, number of the *National Geographic Magazine*. This is thought to have been a city of refuge of earlier date

than Cuzco, a large walled settlement 2000 feet above the bottom of the valley and 7000 feet above the sea. The Spaniards appear never to have reached this point, hence the ruins are in a remarkable state of preservation. Here are terraces, many houses, fountains, towers, 100 staircases, and beautiful walls of rectangular stones. The valley itself with its steep rugged walls, its luxuriant vegetation, and its views of snowclad mountains is one of incomparable loveliness.

Nearer to Cuzco are ruins previously known and easily accessible, at Yucay palaces and baths, and still higher up the valley the fortress, palace, and rock tombs of Pisac; all of these in the same valley, that of the River Vilcamayu or Vilcanota, as it is called in the upper part, below becoming the Urubamba, then, on uniting with the Apurimac, the Ucayali, which with the Marañon forms the Amazon.

Other ruins, Choquequirau on the Apurimac River, Ñusta Espana and Vitcos on the Vilcabamba River, are more difficult of access, though by no means impossible; but to investigate all would require weeks. Before undertaking such journeys, one should read the accounts of other travelers and come suitably prepared; they are not for the ordinary tourist. When the railroad has been extended from Huancayo to Cuzco, a very expensive work, the completion of which may be delayed for some years, this wonderfully romantic region will attract many visitors.

CHAPTER XIII

BOLIVIA—CUZCO TO LA PAZ

FROM Cuzco the tourist will return to Juliaca, the junction on the main line, where he should arrive in time to take the train at 6.15 p. m. for *Puno* on Lake Titicaca, a ride of an hour and a quarter. The time table should be carefully studied in Arequipa and the journey planned to avoid a stop-over at Puno. Should this occur, notwithstanding, one may look about the town, which, founded in the seventeenth century, is an important center of trade in alpaca and vicuña skins and wool. One may therefore inquire for *rugs*, as these either of *white alpaca* or *vicuña* are valuable souvenirs, also purchasable in La Paz. The shorter vicuña fur from the necks and legs is considered more desirable; though the longer is preferred by some. The rugs vary in price according to buyer and seller, as well as the quality of the fur, from 25 or 30 *soles* to 100 or more for a special order. In La Paz they are sold at from 40 to 80 *bolivians* each. Alpaca rugs are more rare and cost about the same as the better vicuñas. They are quite double the weight. Llamas, sometimes called the camels of the Andes, are prized chiefly as burden bearers, though their long coarse wool is serviceable. The vicuña and alpaca are never used as pack animals, being smaller and of lighter build. The fine quality of the vicuña wool and its scarcity makes it expensive and desirable. A poncho or any other article of this wool is something to be valued. The Indians alone manage all of these animals successfully; though the vicuña is hardly domesticated. A profitable industry in which to engage would be the culture if possible of these animals for the wool. The llamas are of various colors, black, brown, white, and mixed; the alpacas are oftener black or white, the vicuñas a tawny or fawn shade, fading almost to white on the belly. None of these animals have horns, and

spitting is their only weapon of defense. They range mostly from 12,000 to 15,000 feet in Peru and Bolivia.

Puno is quite a town with a large plaza, several churches, many nice homes, a college, a hospital, and, in the vicinity, many ancient monuments; one famous round tower, called a *chulpa*, at Sallustani, of unknown origin, is by some believed to be a burial structure. Puno on the frontier of Peru is a meeting place between the two tribes, the Quichuas and Aymarás, the latter, residents of northern Bolivia, while the Quichuas occupy the plateau region of the greater part of Peru and of the central and southern portions of Bolivia.

Lake Titicaca, halfway between Panama and Cape Horn, is on a great plateau more than two miles vertically above the level of the sea. About 135 miles long and 66 wide it has, with a very irregular outline, an area of more than 5000 square miles. Although at so great an altitude the waters never freeze, being slightly warmer than the atmosphere, the temperature of which in winter is often as low as 30° Fah. Snowstorms are no rarity. The glacier-covered mountains on the southeast have some effect upon the climate. A number of small streams flow into the lake which has a single outlet at the southwest corner, the Desaguadero River, 180 miles long, emptying into Lake Poopo. For a distance of 30 miles from Lake Titicaca the river is navigable for boats of 500 tons. So high that one Mt. Washington piled upon another would not rise above the surface of the water, and the loftiest mountain in the United States proper would appear but as one of the grassy hills around, this sheet of water, 12,500 feet above the sea, nearly as large as Lake Erie, is the most elevated in the world where steamboats regularly ply.

In the winter months, June, July, and August, it is quite dark before Puno is reached, but in the gloomy dusk one will have on the left glimpses of the Lake. At the Puno Station an animated throng will be waiting for the many who descend from the train; but the majority of first-class passengers, if it is the right day, will remain in the car for the half-mile ride to the docks, where they embark on a 1000-ton steamer for the sail to Guaqui in Bolivia. Formerly the steamer lay at the wharf until morning, the passengers sleeping on board. Then a delightful all day's sail was enjoyed with continually

charming views of deep bays, irregular hilly shores, rugged picturesque promontories and islands, and after a few hours, the splendid Cordillera Real at the east. Towards sunset, the line of snowclad giants, stretching from imposing Illampu to Illimani, presented a spectacle of extraordinary magnificence.

To those who delight in ancient myths and archæological research, perchance to all who know the legend of Manco-Ccapac and Mama Oella, children of the Sun, it would be a privilege to call at the sacred islet *Inti-Karka* or *Titicaca*, now commonly referred to as the Island of the Sun, whence these two set forth on their wonderful mission and career. It was reserved for the fourth Inca, Maita-Ccapac, to return with an army to this region, then entitled Collasuyo, and to reduce the people to submission; and for his successor, Ccapac Yupanqui, to complete the conquest. The Incas were greatly impressed with the more ancient monuments at Tiahuanaco, evidences of superior civilization; and on the island from which his ancestors were supposed to have issued on their beneficent, civilizing mission, Tupac Yupanqui erected a splendid palace and a temple to the Sun, the richest in his entire empire. A temple also was built to Thunder and Lightning, a monastery for the sons of nobles, a sanctuary for vestal virgins, and dwellings for his courtiers. The island is said to have been paved with gold and silver. A smaller island near by is called *Coati* from Coya, the Moon, wife of the Sun, where temples to the Moon were erected. On both islands many remains still exist, but to visit them is difficult, as the regular steamers sail direct from Puno to Guaqui, at the south end of the lake. These boats which were built in Scotland, brought up in pieces and here put together, have comfortable state-rooms with electric lights and afford good enough meals. The curious native boats, the *balsas*, one must try to get a glimpse of near the dock at Puno, or in the early morning. These are made of reeds, which grow in the water near the lake shore and are bound together in rolls. The broad sails also are of reeds. After a while they become water-soaked, lasting only about six months. The boats are propelled from shore with a long pole. Before the coming of the steamships these boats transported much freight among the various lake ports,

but are now little used except by the Indians who are adept in their management and seldom wrecked, though often severe storms suddenly arise. August is the month of best weather, though the coldest. Warm clothing and wraps are indispensable. Thunderstorms may occur at any time, especially in summer when waterspouts are not infrequent; but in my seven crossings the weather has always been good and everything comfortable; berth and meals are provided without extra cost.

Copacabana. In 1903 the steamer called at the town of Copacabana, on the west shore of the lake, where there is a far-famed shrine to the Virgin, once the richest and most renowned in all South America. The story goes that the image of the Virgin is the work of a converted Indian, who, ignorant and unskilled, from pious zeal devoted many years to the task. Aside from the face and hands, the entire image is covered with gilt upon which are colored designs so applied as to give the effect of an elaborate robe. The gold crown and the many priceless jewels with which the image is decorated possess a value indeed amazing to find in a town largely Indian in this remote corner of the globe. Candles are ever burning before the sacred shrine. Besides the church, a cupola on columns of Moorish style is notable. At the time of the great festival to the Virgin in July, this usually quiet town is thronged with Indians who come from all directions, a distance of 100 leagues. Mingled with Catholic ritual and ceremonies are primitive Indian rites and beliefs, and the religious exercises are followed by grotesque dances and songs, drunkenness and bestial excesses, as happens generally on the great feast days elsewhere among Quichuas and Aymarás. In an earlier period there was here a city with accommodations for the pilgrims who annually came to visit the Temple of the Sun on *Inti-Karka* and to pay homage to the Inca. Pilgrims still come from Mexico and Europe to be healed. The tourist has now no opportunity to visit the place except by chance, or with an outlay of considerable time, trouble, and expense, by chartering a special *balsa* or by making use of the small coasting steamer.

One should rise early the morning after leaving Puno, in order to enjoy the imposing sight of the great mountain range

from *Illampu* to *Illimani*, a distance of 100 miles. No more splendid vision, some maintain, may be witnessed on the whole round earth. As one beholds the glistening glaciers which, pierced by bristling ramparts of rock, in immense masses clothe the vast and towering peaks, with the brown plain and the blue waters of the lake as a contrasting foreground, it is difficult to realize that one is two miles above the sea and still within the Torrid Zone. After passing through a very narrow strait, the ship sails west into a considerable bay, at last along a narrow, artificial channel to the port of *Guaqui* near the southwest corner of the lake. It is a bustling place with plenty of Indian men and boys to assist in transporting hand baggage to the train 30 or 40 rods distant. A trifle bleak, maybe, in winter, exercise and sunshine promptly dispel discomfort. There is not much of *Guaqui* save the dwellings connected with the port and railway terminal. It has been growing with the increase in traffic ever since the opening of the railway in 1903; but its progress may now be retarded by the new railway from the Pacific recently opened between Arica and La Paz. Life on this desolate plain which might seem a dreary lot to many is yet enjoyed by civilized Englishmen and their families, who find the climate agreeable and are content in the possession of all essential comforts.

The cars for the journey to La Paz, 60 miles distant, are of ordinary American style. A seat on the left will afford the finer prospects, though at the start the hills on the right are higher. These are often covered with a thin coating of snow which at times spreads over the plain. Near the lake the land is well covered with brown bunch grass, good food for cattle, many of which with long rough hair may be seen from the car window. Trains of donkeys, mules, and llamas are often in evidence, and many Indian men and women, not very prepossessing in appearance, the Aymarás, who are of more churlish manner than the Quichuas of Peru. Along the line are Indian villages and solitary dwellings of sun-dried bricks, the latter surrounded by thick walls of the same material, though walls of stone are used to separate the cultivated fields. Fifteen miles from *Guaqui* is *Tiahuanaco*, the seat of a wonderful prehistoric civilization. Beyond the railway station may be seen at the left great stones of a sacred enclosure, a

mound showing evidences of excavations, perhaps a colossal statue. No time is given to examine these marvellous ruins, for which purpose one must make an especial excursion from La Paz.

After an hour or so the Cordillera comes again into view, when the great Illampu will excite profound admiration, until the Alto Station is approached. Two hours from Guaqui the train reaches the station *Viacha*, a junction from which a road leads south to Oruro, and the newer road west over the mountains, to the sea at Arica. Often there is here a long wait, which begins with much bustle and animation, women offering for sale fruits, rolls, and a variety of curious concoctions. The village is at some distance on the right; a church is conspicuous on a hilltop. A half hour beyond at the Alto Station another pause is made. The train is divided into sections and with a special engine attached the car proceeds in reverse direction. For a moment it continues on the practically level plain, but keep a sharp look out! Presto! You begin to descend and suddenly perceive that you have passed the brink of an enormous cañon, its vicinity hitherto unsuspected, and you gaze in astonishment at the steep enclosing walls and far below in the distance on the red roofs of the city of *La Paz* more than 1000 feet beneath. A remarkable, astonishing, and delightful ride is before you. One wishes to look all ways at once, to admire the long curves of the winding track, the strangely carved walls of the cañon, the troops of llamas or burros with their Indian drivers, the steep pathways up which they toil, the patches of bright green in the midst of the brown slopes, and the gradually approaching city. The descent is on the sloping head wall of the curiously carved oval basin, the sides of which appear in places perpendicular and converge at the farther end in such a way as to leave no opening visible, though an outlet is really there. The upper edge of this great basin is called the *alto* or height by the people dwelling below. Thus concealed in the very heart of the Andes is the unique city of La Paz, with its 80,000 inhabitants, over 12,000 feet above the sea, the highest capital on the globe, a curious, fascinating place, surrounded by these strange walls; while brilliant, snow-crowned Illimani, towering in majesty 9000 feet above, adds a charm comparable



BALSAS, LAKE TITICACA



LA PAZ, FROM THE HILLS

THE
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NEW YORK

to that which the Jungfrau gives to Interlaken. But La Paz itself is as high as the shoulders of that glacier-robed Alpine summit; an altitude which in other regions signifies perpetual snow here bringing only a temperate clime, where flowers blossom in the open throughout the year, and the rare inch or two of winter's snow quickly vanishes in the morning's sunlight.

The railway down to the city, by many pronounced impossible of accomplishment, was opened in October, 1905, through the initiative and agency of Mr. T. Clive Sheppard, then Superintendent of Public Works. The road, $5\frac{1}{2}$ miles long, has an average grade of six per cent with curves on a radius of 100 meters. The power is electricity obtained from mond gas, an explosive mixture compounded of coal gas, steam, and air, cheaper than either gas or steam; a consideration of importance where coal from Australia in 1908 was selling at retail for \$50 a ton.

At the station are porters who for modest fees will transport to your hotel your baggage, both large and small. Big trunks they carry on their backs with apparent ease. Carriages may be at hand, costing one *bolivian*, 40 cents; or on the other side of the station an electric car, fare 20 *centavos*, first class, will soon be passing. This will bring you to the Hotel Guibert, half a mile distant, the oldest and best of the hostleries of the city, unless a new one, long promised, should be already completed. 20 *centavos* is an ample fee for the boy who takes a bag to the car or even to the hotel, and 50 *centavos* to the man who brings the trunk.

Of the early history of Bolivia, little is known. At the time of the Spanish invasion the country was under the sway of the Incas. These being overthrown, no resistance was here offered to the advance of Diego de Almagro, who chose this route for his southward march for the conquest of Chile. After this unhappy adventure Gonzalo Pizarro invaded the country; the city of Chuquisaca was founded (at times called Charcas, and La Plata), now known as Sucre. Quarrels among the invaders culminated in a victory near Cuzco by the Viceroy Pedro de la Gasca over Gonzalo Pizarro, who was put to death. As a memorial of the peace thus secured, La Gasca ordered Captain Alonso de Mendoza to found a city in the valley of Chuquiapu, where an Indian village already existed, and

October 25, 1545, the first anniversary of the battle, the foundations were laid of a city named Nuestra Señora de La Paz. The city of Potosí had been founded a few months earlier, after the discovery of the wonderful silver mines which soon made the city and *cerro* famous throughout the world.

The country now known as Bolivia, formerly Alto Peru, was a part of the province of New Toledo granted to Almagro, who was beheaded after his party was defeated in a conflict with Pizarro's forces near Cuzco, subsequent to his return from his unfortunate expedition to Chile. In 1542 the Viceroyalty of Peru was created with authority over all the Spanish American possessions. Under the Viceroy were later two *Audiencias Reales*, Royal Audiences, of Lima and of Charcas, the latter covering the former New Toledo and having jurisdiction over the provinces of Tucumán, Paraguay, and Buenos Aires. The *Audiencias* were supreme courts possessing also executive functions, and were responsible to the Crown. The *Audiencia* of Charcas, created in 1559, had its chief seat at Chuquisaca, the site also of the bishopric of Charcas, and of the University of San Francisco Xavier, renowned in Spanish America for its learning, and ranking with Salamanca in Spain. La Paz became a Cathedral city in 1605, and Chuquisaca in 1609 was made the seat of the archbishopric of La Plata. Other cities were founded; explorations were made east and north of the Andes Mountains; the work of christianizing the Indians was prosecuted by the Jesuit, Franciscan, and other *padres*. At the same time great abuses were practiced upon the natives, who both in Peru and Bolivia were compelled to work in the mines, and suffered such hardships and cruelties as rapidly to diminish their numbers. In the seventeenth and eighteenth centuries there were many struggles and conflicts, chiefly between the native born Americans of Spanish ancestry and the rulers who were for the most part Spanish born; several insurrections occurring with intent to throw off the Spanish yoke. In 1776 the Viceroyalty of Buenos Aires was established, to which the *Audiencia* of Bolivia was transferred. In 1780 occurred an Indian rising instigated and directed by three brothers named Catari, for whose heads 2000 *pesos* each were offered by the *Audiencia*. Thus they were betrayed. The Indian revolt in Cuzco led by Tupac Amaru occurring about this time incited the Bolivian Indians to further efforts. The Indian Ayoayo with 80,000 men for three months besieged the city of La Paz until dispersed by an army from Chuquisaca. The town of Sorata was destroyed, but in the end, after 50,000 lives had been lost among the Spanish Americans and many more of the Indians, they were finally crushed.

Injustice and oppression had been the lot, not of the Indians only,

but of the native born Spanish Americans, in spite of the fact that especially from Peru and Bolivia fabulous wealth had flowed into the treasury of Spain. The Revolution in North America was a warning, but the concessions granted were too late. July 16, 1809, conspirators at La Paz deposed and imprisoned the Governor and proclaimed the independence of the country, organizing a *Junta* of which one of the leaders in the movement, Pedro Domingo Murillo, was elected President. This insurrection deserves especial notice as the first effort in South America towards democratic government. A trained army sent by the Viceroy of Peru overcame the feeble opposition of a few patriots, and Murillo, January 29, 1810, perished on the scaffold; yet full of confidence he exclaimed in the words of another, "The torch which I have lighted shall never be extinguished." Within a few months the Viceroy at Buenos Aires was deposed and an army from Argentina under General Belgrano met and defeated the royalists on the field of Suipacha. From this time on, there were various conflicts in which the royalists were usually successful; but the patriots, in spite of serious defeats, for years continued a persistent guerilla warfare in which a large number of their leaders perished. The arrival of General San Martin with his victorious army at Pisco in Peru, and soon after the proclamation of independence at Lima, July 28, 1821, gave new hope to the Bolivians. The battle of Ayacucho December 9, 1824, having ended Spanish dominion in South America, January 29, 1825, just fifteen years after the first patriots suffered martyrdom in the plaza, the last Spanish authorities evacuated La Paz, which was occupied by the Independent Army of Alto Peru under General Lanza the same day. The victorious army under General Sucre, marching from Cuzco, made a triumphal entry, February 7, 1825, in the midst of wild rejoicing. With General Sucre acting as the prime organizer of the Republic, the first National Assembly met in June at Chuquisaca. The Act of Independence bears the date of August 6, 1825; the Republic was named for Bolívar, who was elected its first President, while Chuquisaca was made the capital under the name of Sucre. Nuestra Señora de La Paz became La Paz de Ayacucho. General Bolívar, on his arrival in La Paz August 18, was greeted with unbounded enthusiasm. In November at Sucre he was inaugurated President, but resigned in January, 1826, to return to Lima. The troublous times which followed, continuing many years, must be passed over, up to the Chilian war. A quarrel arising over the collection of an export tax on nitrate, Chile sent troops to occupy Antofagasta, then Bolivian territory. Peru having previously made a secret treaty with Bolivia joined her in the declaration of war, April 5, 1879. As the allies were al-

together unprepared, Chile was completely victorious and Bolivia lost what little coast she had previously possessed. During the last thirty years, however, internal dissensions have for the most part ceased, and with more stable government there has been successful development of the rich resources of the country. In 1898 trouble arose over the question of the seat of government, sessions of Congress having been held in several cities. Congress passed a law that Sucre should be the permanent residence of the President and Cabinet. The people of La Paz protesting, a Federation was formed and, after several engagements, General Pando, commander of the revolutionary forces, gained a complete victory, with the result that La Paz was made the real seat of government although Sucre retains the name of capital. General Pando was elected President. During his administration occurred the Acre boundary difficulty settled by the cession of considerable rubber territory to Brazil, in return for which Brazil paid Bolivia £2,000,000 to be used in building railways, while Brazil further agreed to construct the so-called Madera-Mamoré railway around the rapids in those rivers, thus giving to Bolivia an outlet by the Amazon and Pará for her own rubber districts and for a large section of her territory. Under President Montes (1904-1908) a treaty was made with Chile according to which, in addition to bestowing a subsidy and other considerations, Chile agreed to build a railway from Arica to the *Altos* of La Paz, recently opened to traffic, and affording a shorter route to the Pacific than those by Mollendo or Antofagasta. During the administration of President Eliodoro Villazón progress has continued in other directions and especially in the development of railways. The road from Rio Mulato to Potosí has been opened and that from Oruro to Cochabamba will probably be in operation before the close of 1913; thus these two important cities are brought into better communication with the outside world. The Madera-Mamoré Railway is already in service. President Villazón is now succeeded by former President Montes.

CHAPTER XIV

THE CITY OF LA PAZ

THE *Grand Hotel Guibert* is well situated at a corner of the principal Plaza. Though not on the square, several windows overlook it and from many the music of the band concerts may be heard on Sunday and Thursday evenings. The hotel entrance is on the calle Comercio, one of the principal streets of the city, running longitudinally in the valley. The side windows, on a street running down the steep hill, look across upon the side walls of the Cathedral which fronts upon the Plaza. The hotel, with two stories in front and three in the rear, is an ancient structure several centuries old, with handsome carvings on the inner walls. These once surrounded a large patio, originally open to the sky and with a sloping pavement, which might be entered from the side street. In 1903, the patio was occasionally occupied by a drove of llamas, or by men discharging freight, or with other matters; but now, roofed and floored, it has been converted into a large dining-room. The cookery is a combination of French, Spanish, and Indian styles. The hotel has a rather narrow entrance and stairway, and no salon or parlor in which guests may be received. The chambers, provided with electric bells and lights, are quite palatial with expensive French furniture, thick carpets, canopied bedsteads with embroidered sheets and splendid blankets. The luxurious bed, placed by the door, leaves a large space near the window as a drawing-room where callers may be entertained. When a foreign minister arrived, tall and stately screens were brought in to partition off the bed from the rest of the apartment. After Cuzco and Arequipa, the hotel will seem quite cosmopolitan and satisfactory, though the arrangement of bath-rooms and toilet on an inner patio leaves something to be desired. So crowded is the hotel that sufficient accommodations are hardly afforded

by the main building and two dependencies, one on the Plaza facing the palace, the other, three stories high, on the same calle Comercio three blocks nearer the station. To secure a good room or even to be sure of any, it is wise to telegraph from Arequipa or Cuzco. Prices vary from 7 to 15 *bol.* a day for room and board, 8 or 10 being the average fee except for the largest rooms. Morning coffee is served in one's room, *almuerzo* is from 11 to 2, the crowd coming between 12.30 and 1.

Another hotel nearer the station, kept by a German, is said to be very neat, and good for the money, the price being lower. It was rumored in 1911 that the millionaire mine owner, Señor Patiño, had purchased a corner on this street on which to erect a large up-to-date establishment. This would be a boon in view of the rapidly increasing travel. On the street floor of the Guibert is a large café, a good part of the day and evening filled to overflowing with gentlemen, both natives and foreigners, at small tables, regaling themselves with a cocktail or some other beverage, discussing business or politics, or shaking dice, to the serious neglect, I was told, of the important affairs of life, as is frequently the case elsewhere.

The city of *La Paz* (population 80,000) on both sides of the Chuquiapu River, which flows at the bottom of the cañon in a southeasterly direction, has the greater part on the left bank. From above it appears as if on the broad floor of a valley, but later it is seen that both banks rise steeply from the stream. Thus while the main streets running parallel to the river have but slight incline, those at right angles are so steep as to make carriage driving almost impossible. Both streets and sidewalks are narrow, and paved with small cobblestones, though the walks have also blocks of stone, alternating checkerboard fashion with the squares of cobbles. So narrow are the walks that only two may go abreast, the gentlemen often stepping into the gutter to allow a lady to pass. In fact on the steep ways many prefer the middle of the street as being less slippery, a safe enough place, as on these one meets chiefly other pedestrians or llamas. The latter are one of the main attractions and charms of *La Paz*, troops of graceful animals occasionally blocking the streets, bringing ice perhaps from the

THE
CATHEDRAL
AND
GOVERNMENT PALACE



CATHEDRAL AND GOVERNMENT PALACE



HALL OF CONGRESS, MONUMENT TO MURILLO



glaciers of Illimani or some nearer and invisible mountain; or *taquia*, the dung of the llama, here the chief fuel; or carrying away imported merchandise to Indians or others, dwelling off the few lines of railway.

The multitude of Indians (*Aymarás*, less prepossessing than the *Quichuas*) and of *cholos*, who together form nine-tenths of the population of Bolivia and two-thirds that of La Paz, also gives a picturesque novelty to the place, attracting eager attention if not admiration by the strangeness of their personality and garb. The Indian men bearing loads or driving herds of llamas, both apparently belonging to some remote patriarchal age, the women sitting in the streets or squares, knitting as they preside over the sale of edibles, knit goods, or other wares, or handing out a bowl of *chupe* (soup) to a patron, the *cholas* (women of the half-breeds) in gay attire, are a constant source of interest.

One's sight-seeing naturally begins with the open square close to the hotel, called the *Plaza Murillo* from the patriot, Pedro Domingo Murillo, executed here in 1810. This, too, is the spot where independence was first declared in 1809. The square has seen many turbulent episodes. In 1894 the existing park was laid out. The fountain in the center was the work of a talented Indian, Feliciano Cantula, in 1855.

On the same side of the Plaza as the Cathedral is the *Government Palace*, erected in 1885; an earlier structure having been destroyed by fire. This contains the offices of many state officials and in the upper story the office and residence of the President and his family. In October, 1908, a grand ball was here given by President Montes in honor of the Princess Argendoña of Sucre, on which occasion the large patio was entirely floored over at the second story to form a ball room, which with the corridors was handsomely decorated with hangings of heavy broadcloth in various colors. The affair was altogether elegant, the costumes of the ladies in the latest Parisian modes, the refreshments most elaborate; ices, cakes, and wine were served at small tables throughout the evening, and at two, a fine supper with soup, hot meats, roast beef, turkey, etc., delicious salads, and other viands. The dancing, which began about eleven, continued until seven a. m.

Across the corner is the *Hall of Congress*, a fine new edifice

completed in 1905, though sufficiently advanced for the inauguration of President Montes in 1904. In addition to the Chambers of the Senate and the House of Deputies, the building contains among other offices those of the Minister of Foreign Relations. The *Cathedral*, close to the Hotel Guibert, in process of construction, is likely to continue thus for many years. In 1835 a design was adopted of a Bolivian architect, Padre Manuel Sanauja. The foundations were laid in 1843, when stone cutters were imported from Europe to instruct the Indians in cutting and polishing the stone. They proved apt pupils and were soon qualified to continue the work, which has, however, been much delayed through troublous times and the fact that railroads and other projects for material advancement seemed of greater importance. Now, however, with an appropriation of 100,000 *bol.* annually, the construction is slowly but steadily proceeding according to plans of Señor Camponoro adopted in 1900. The structure when finished will be the largest and most expensive cathedral erected in South America since the Independence, and may be the finest of any. Covering 4000 square meters it will be capable of seating 12,000 persons. Of the Græco-Roman style, it will have five naves with columns of polished stone, towers nearly 200 feet high, and a dome, the top of which will be 150 feet above the floor. *Berenguela*, a native marble, will be used for the great altar.

Two blocks north of the Plaza is the pro-Cathedral, the church of *Santo Domingo*, where such services are held as are regarded as functions of State. Thus on the day of the funeral of Pope Leo XIII in 1903, a procession including the President, the Ministers of State, and other Bolivian officials, with members of the Diplomatic Corps, all in evening dress, the customary garb on formal occasions in South America and Europe, marched from the Palace to the Church with a large escort of soldiery, a regiment also lining the streets en route.

The city contains twelve other churches, five public chapels, five convents, and three monasteries. The handsomest church is that of *San Francisco* on a plaza of the same name, down on a fairly level space in the hollow. A church and convent were erected here in 1547, but the present edifice dates from 1778. Its façade of carved stone attracts attention, from its

excellent design and workmanship. The interior has three naves and eight altars, besides a high altar of carved cedar. The convent with accommodations for two hundred at last accounts had but fourteen inmates, though recently reconstructed from a legacy left by a rich lady of La Paz. The convent contains one of the largest libraries of Bolivia.

Besides several other plazas, either entirely paved or having a little green, there is the usual *Alameda* nearly half a mile long, which, like the Plaza Murillo, has been the scene of conflicts. On the right bank of the stream towards the lower end of the city, this quiet promenade, ornamented with several rows of trees, has broad driveways, a wide central walk with pools which swans adorn, and fountains with basins containing gold fish. At each end of the *Alameda* are portals, of which the lower, leading to the Plaza de la Concordia and the *Avenida Arce*, was taken from a convent cloister and set up here in 1828. Along the *Alameda* are many new and pretty residences in rather modern style, without a central patio, as also above and beyond, this being a very fashionable and growing section of the city. The tints of pale blue, green, yellow, crushed strawberry, etc., in which the houses are painted, in the clear sunlight and contrasting shadows present a gay and pleasing appearance.

More interesting to many than plaza or *alameda* is the *Market Place* found on the calle Mercado, parallel to the Comercio, and two blocks down the hill. Going down the street at the corner by the Guibert and turning to the left, the entrance to the market, an arched portal, will be found in the middle of the third block on the right hand. Though not very noticeable the market place occupies the greater part of the square, the site of the former convent of San Agustín. The best time for a visit is as early as possible on Sunday morning, when hundreds or thousands of Indians come in from outlying districts. The adjacent streets, as well as the market, are thronged with these strange looking people. Both men and women have bare legs and feet, though some wear sandals. Their heads are more carefully protected with woolen hood and hat. The men's trousers are noticeable, wide at the pockets according to Spanish style at the time of the Conquest, and with a slit up the back, showing white drawers

underneath. Made of dark cloth they are often worn lining side out to preserve them from damage while wearers are at work, when they appear gray. The women wear several short heavy skirts, and over woolen waists a shawl or two, in one of which a baby is apt to be carried on the back. The *chola* women are much gayer in attire, with many bright colored woolen skirts, red, green, blue, yellow, one showing below another, or with a richly embroidered, white under-petticoat, these standing out like a balloon. They generally wear a jaunty white or gray hat resembling a derby, several shawls, often open-worked stockings, and shoes with high French heels. A great contrast to these are the Spanish American ladies, in the morning on the way to church or market robed in black, the black *manta* over their heads, but when calling or visiting attired in the latest Paris fashions. The gentlemen, too, are extremely punctilious as to correct dress, appropriate to the hour and the function.

Within the market place and on the streets around are women sitting by their stalls, in the doorways and on the sidewalks, selling their wares, dried and fresh fruits, vegetables, hot soup, *chuños* (dried potatoes), *chalonga* (dried sheep), and articles of almost every kind; shoes, stockings, salt, sugar, meat, coca leaves, rather coarse native lace, or cheap, imported, machine-made, funny little rag dolls in Indian garb, five or ten *centavos* each, red beans which would make a pretty necklace (they are not real beans), soft woolen mitts, mittens, and caps, and coarse caps or hoods, with face masks. The women are always knitting (except at meal time) when not employed with a customer. People will be found here at any hour of the day and one may go again and again with interest; the numerous babies and toddlers, though dirty, add to the picturesqueness of the scene. The women seem pleasant and more prepossessing than the men. The knitted articles are astonishingly cheap and the dolls are of a quaint ugliness. Everything may be found here but flowers, which are sold in a square above by the La Merced church on a prolongation of the calle Comercio. Sweet peas, pansies, roses, and other flowers brought from the valley below are sold at a ridiculously low figure. A *bolivian* will purchase as many as you can carry.

There are many good shops in La Paz, the dry goods, mostly



STREET NEAR THE MARKET



IN THE CEMETERY OF LA PAZ

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on the calle Comercio or the Mercado; the largest called El Condor, with several branches, doing an immense business. There are book stores, banks, and all ordinary institutions. The house of W. R. Grace is on the calle Mercado towards the market. The *Post Office* is on the calle Comercio just beyond the Palace, the office of the Prefect is on the floor above. A short distance down the steep street between is the Police Station.

On the side of Plaza Murillo opposite the Capitol, at the upper corner is the building, entrance on Ingavi, which contains the Library of the *Geographical Society* and the office of Don Manuel V. Ballivián, geographer and statistician, formerly Minister of Agriculture, who speaks English fluently and is most courteous in giving information to students, explorers, or investigators of the resources of the country. The Geographical Society, of which Mr. Ballivián is President, has by its publications and research contributed much to the knowledge of the country, which Mr. Ballivián has himself extensively explored. He is author and editor of many valuable works.

On the first floor of the same building, with entrance on the Plaza, is the *Museum of Natural History and Industrial Propaganda*, containing specimens of the flora, fauna, and great mineral wealth of the country, ancient sculpture, aboriginal mummies found on the plateau, pottery of the Inca period and earlier, and other paraphernalia, as well as curious examples of modern textiles, and other work and implements of the civilized and savage Indians.

Passing one block along Ingavi and turning to the right one will find on the left the *Theater*, of modern construction, recently remodeled and equal to the average theater anywhere. Entertainments here given are frequently subsidized by the Government; as, however well patronized, the receipts would hardly be sufficient to pay a company for the long expensive journey from the sea coast. At the corner, before turning up the street, is the *Municipal Library* and free reading room, open day and evening, where, as in all quarters, the inquiring stranger will receive the greatest courtesy. On the block beyond the theater is the *University*.

As in other cities of the West Coast there is a *Bull Ring* in the outskirts where occasional fights are held with skillful

Spanish *toreadors*. Several pleasant walks may be taken by one who is fond of hill climbing. A little *Chapel* at the top of the left wall of the cañon to some may seem inviting. It is an hour's walk, with suitable pauses affording attractive views of the city and cañon; but the arrival is disappointing, for a further though moderate slope cuts off the expected view of plateau and distant mountains. How much farther one would have to go to obtain this, I am unable to state. Some writers warn the stranger not to walk at this altitude except for short distances. It is well to be cautious the first day, especially if there is the slightest symptom of discomfort, and at any time persons should avoid too rapid walking, especially uphill, and be careful not to overdo. This is a great country for climbing, its opportunities yet unimproved, Illimani (21,000 feet) being the only one of its high mountains whose summit (by Sir Martin Conway) has yet been reached. There is no better exercise, providing the recreation is wisely pursued; but of course not every one can endure the altitude even of La Paz, to say nothing of 8000 or 10,000 feet more.

A walk down the valley may afford pleasure, though the majority may prefer to employ a carriage, or a horse. On foot he will hardly get far unless taking a whole day. The road winds around, and the wall blocking the lower end of the cañon is more distant than it looks. It is a delightful little drive to Obrajes, three miles distant. Every one should go at least so far, and will then wish to continue. The curious shapes of the cañon walls, the bright variegated colors of the cliffs, the road winding in great curves down the rapidly descending cañon, the beautiful green of alfalfa meadows, the pretty villas and gardens, and glorious Illimani above, excite ever increasing admiration. One with plenty of time at his disposal may ride down the valley to a hacienda, Cebollullo, at the foot of Illimani, enjoying the most magnificent scenery; but two days would be needed to go and return. Down this cañon one may proceed to the Yungas Valley, whence come the vegetables and fruits for the La Paz market. A railway will some day open up this country, extending to Puerto Pando on the navigable waters of the Beni, whence one may cross the continent to Pará by boat and by the newly con-

structed Madera Mamoré Railway, but our tour does not lie in that direction.

An excursion on foot or horseback may be made to the noted gold mine Chuquiagnillo, a league from the city, which in the eighteenth century produced one hundred and twenty-five million dollars gold. Here Indians were washing for gold when the Spaniards arrived and here they work still under a German superintendent, the gravel yielding about thirty-five cents gold a cubic foot, with an occasional nugget. One found in 1905 contained 45 oz. of gold. It was recently reported that this property has been purchased by Americans, the Bolivian Goldfields Company.

CHAPTER XV

OTHER REGIONS OF BOLIVIA—ROUTES TO THE SEA

Tiahuanaco. All who have an interest in legendary lore and in ancient monuments of a mysterious past should surely make the excursion to Tiahuanaco. Even those who have no especial leanings in that direction cannot fail to be impressed and may possibly be fascinated by these strange relics of a by-gone age. Taking the morning train to Guaqui, one descends at Tiahuanaco and after a stay of three or four hours may return to La Paz in the evening. The real student could profitably devote as many days as the ordinary tourist would hours to the examination of the ruins. These are believed by Sir Clements Markham to indicate the existence of a large city, while others think that this was rather an immense sanctuary and never a place of general residence. The existing remains on the broad plateau, 135 feet above Lake Titicaca, from which it is 12 miles distant, are supposed when erected to have been on the shore of the lake. A great terraced mound of earth, supported by stone walls, having an area of 620 by 450 feet and a height of 50 feet, is called a fortress, and also a palace. Long used as a stone quarry for the erection of buildings in neighboring towns, even in La Paz, 60 miles distant, it is now in an extremely dilapidated condition. The excavations of treasure seekers as well as of scientists have also contributed to its ruin.

About a quarter of a mile from the station is a construction, generally regarded as a sacred enclosure, which has the form of a rectangle, 388 by 445 feet, marked by granite blocks 15 feet apart and 8 or 10 feet high, conspicuous objects on the brown plain, reminding of Stonehenge. These monoliths are supposed to have been part of a wall, the spaces between filled in with rough stones. A temple may have stood within, but of this there are no remains. A massive monolithic gateway, broken and apparently not in its original position, may



MONOLITHIC GATEWAY TIAHUANACO



INDIANS AT FESTIVAL—TIAHUANACO

once have afforded entrance to the enclosure. This great piece of stone, 13 feet wide, 7 feet above ground and 3 feet thick was probably fractured by an earthquake. The curious and elaborate carvings on the upper part of one side have been variously explained, but the interpretation endorsed by Sir Clements Markham, long a profound student of Peruvian antiquities, is most highly regarded. In the center is a human head supposed to represent the creator of the universe Pachacámac or Viracocha, to which the other figures, partly human and some with heads of condors, seem to offer adoration. Three other constructions, one called the hall of justice, are remarkable for their extent and for the cyclopean masses of stone. There is abundant evidence of extraordinarily skillful masonry and of excellence in sculpture. Many of the enormous stones are unequaled in size in any other part of the world save by the monoliths of Egypt and some near Cuzco. One stone 36 feet long and 7 wide weighs 170 tons. These have often ornamental carving. A number of statues elaborately decorated have been found here, one of which still stands upright within the enclosure. The great age of these remains is unquestioned. One theory is that they date from a period before the plateau was elevated to its present position when it enjoyed a milder climate.

It is worth while to go over to the modern Indian village, Tiahuanaco. On the plaza is a church, largely constructed of stones taken from the ancient ruins. In front of the church are two ancient and dilapidated statues, long since transported from their original site. The interior of this small church is of extraordinary magnificence, with elaborate gilt carvings, an altar of pure silver, and some religious paintings of moderate excellence.

On the 16th of September elaborate festivities occur, when many Indians appear in velvet or plush garments, blue, pink, or green, embroidered with gold or silver, wearing masks, black, white, or yellow, and elaborate feather head dresses. Pipes and drums, other wind instruments, and wooden rattles make plenty of noise if not music. Some men are dressed to represent devils, with horns and tail; others, animals, as a sheep or a green turtle. The finest suits cost each as much as \$200 gold. At Sorata town a still more elaborate festival

occurs at the same period, lasting for four or five days. Gorgeous feather head dresses may be seen, and fans which could not be purchased for \$75. The execution of the Inca Atahualpa is here represented with mourning by the Indians. These festivals are all accompanied or concluded by drunken orgies. In La Paz, August 15, 1903, occurred somewhat similar but milder festivities, Indians in costume and dances.

Sorata. One who is fond of horseback riding and not afraid of a little discomfort might, with from five to seven days to spare, enjoy an expedition to the town of Sorata. This city of 8000 or 10,000 inhabitants is situated about a hundred miles north of La Paz in a beautiful valley at the foot of the mountain of the same name, better called by the euphonious Indian appellation, *Illampu*. In 1911 a diligence or covered wagon with four horses twice a week made the trip by a fair road over the plain to Achacachi, perhaps 70 miles distant. The diligence sets out at a very early hour, six or half past, making a rather long day. From Achacachi to Sorata town it is a ride of from six to nine hours according to the animals provided. These must be engaged in advance in La Paz and probably sent ahead to meet one there, in which case it is obviously cheaper, though more tiresome, to go on horseback all the way. If this method of travel is decided upon, or indeed the other, an *arriero* must be engaged to provide saddle animals and to take care of them, being paid somewhat in advance. Unless he receives a sum to bind the bargain and to pay his preliminary expenses, whatever he may promise, he is likely never to be seen again. But having accepted money, he generally carries out the bargain, though a written contract is desirable. An *arriero* once agreed with me to furnish four animals, two saddle, one of these for himself, and two baggage animals for eight *bol.* a day for all, he paying the expenses for his own food and the animals; but it might cost double that now. Much depends on chance and ability at bargaining. If making the journey on horseback one should at least take the early train to the *alto* arranging in advance for the animals to meet him above. Setting out from there promptly, a good horseman with first-rate animals might reach Guarina or even Achacachi the same evening and from either place go on to Sorata the next

day. Soon after leaving the Alto Station all traces of life disappear save what is met upon the road, Indians with llamas, burros, etc. The brown plain shows no signs of cultivation, being thickly covered with stones. No village or hut is passed for hours. But the great peaks seen from slowly varying angles are a continual source of enjoyment. A splendid imposing mountain, Huaina Potosí or Cacaaca, about 21,000 feet, with tin mines on its lower slopes, affords an opportunity for a difficult first ascent. The *tambo*, Cocuta, should be reached in time for *almuerzo*; at the very least, Machacamarca for the night: better Guarina, if possible. If one lodges at Machacamarca one must spend the next night at Achacachi and go the third day to Sorata. It is desirable, even necessary, to take blankets for the night, and to provide in the *alforjas* (saddle bags), a supply of chocolate, raisins, etc., perhaps canned meat and crackers. At Cocuta, and the other places, meals are provided, soup, eggs, beefsteak, coarse bread, and tea, but between Achacachi and Sorata there is no place for luncheon; and some chocolate, etc., will come in very well the first day. Except at Achacachi no bed will be found better than a couch of adobe, but with blankets a hard bed is no harm. I have heard dire tales of the insect life which infests some such places, but in my own considerable experience, I never found anything worse than fleas and not many of them. The immense snow fields of Illampu come into view soon after leaving Cocuta. Before reaching Guarina there are glimpses of Lake Titicaca. Between Achacachi and Sorata the Huallata pass is crossed at a height of 14,000 feet. This is a big buttress of Illampu, from the top of which one has a splendid view of the enormous mountain *massif* close at hand, with its several summits all from this side seeming absolutely unclimbable. Descending towards Sorata attention is divided between the tremendous cliffs of Illampu on the right and the romantic Mapiri Valley below. The town, *Sorata*, at an altitude of 8000 feet, has a charmingly picturesque location on a terrace near the head of the valley, among trees, shrubs, and fragrant flowers, in striking contrast to the bare, bleak, brown plain above. On one side the grim walls and glittering summits of Illampu rise nearly 14,000 feet (the height of the mountain being over 21,000), contrasting sharply with the

bluish purple tints down the steeply enclosed gorge opposite. At no distant day electric cars will cross the mountain ridge, and this charming town will be regularly included in the fashionable tours of South America. Sorata now has a fair hotel, as it is the headquarters for several rubber companies which conduct the industry on the lower eastern slope of the Andes, and for many miners who seek placer deposits, or the veins above them, also on the eastern side. Any one with the spirit of the explorer would find it a most interesting trip to make the circuit of the mountain: not a difficult task, but probably never yet accomplished by a white person. To the mountaineer, Illampu still affords opportunity for a splendid first ascent, Miss Peck in 1904 being obliged to turn back in good weather and a fine condition of the mountain at about 20,500 feet simply because her companions refused to advance; while Conway in 1898 retreated from a higher point on account of dangerous conditions of the snow. With Swiss guides the ascent should be easily made, or without them by experts like the conquerors of Mt. McKinley, Parker and Browne.

Train from La Paz Wednesday at 4.15 p.m. arrives at Arica Thursday, 1.40 p. m. Sleeping cars.

La Paz to Arica. At La Paz, if not earlier, decision must be made as to the route in leaving this remarkable city. At present two are offered besides that by which we have come; one by Arica, the other by Antofagasta. If one is averse to a long railroad journey and is not eager to see other Bolivian cities, Oruro, Potosí, Cochabamba, he will prefer the Arica road, 250 miles, by which trains were expected to descend from La Paz in twelve hours to the sea, and the upward journey was to occupy sixteen. On account of the steep grade, the rack-rail system is employed on one stretch for a distance of 25 miles. To render harmless the rapid change in atmospheric pressure, in ascending 14,000 feet in eight or ten hours, a special car-chamber was planned to contain compressed air of the density at sea level. The difference in temperatures is greater than by the other routes. In winter it may be below 0 Far. at the summit, and a few hours later at Arica it may be 86°, though probably less if arriving at evening. Parlor and sleep-



MT. ILLAMPU, 21,750 FT. FROM THE PLATEAU, 13,000 FT.



SORATA TOWN

ing cars are provided and as these are to be heated there should be no trouble on that score. Having come up comfortably one is not likely to be troubled going down. If inclined to see a mining town one may branch off to Corocoro, six miles from the main line, a place of about 15,000 people, long famous for its mines of copper and tin. The copper mines have been called the richest in South America. The lodes are in a sandstone formation in fine grains through the matrix. After grinding and concentration a product results, 85 per cent pure. The Arica road has its own prolongation from Viacha to the Altos and city of La Paz, by the route followed a distance of 22 miles.

The Jamiraya Cañon. To the traveler in search of novelty outside the beaten track, and to the scientist, the route by way of Arica affords a chance to visit one of nature's wonders, the existence of which is unknown to most Bolivians, as well as to the rest of the world. This is a remarkable gorge called the Jamiraya Cañon, of which I received definite information from two English scientists who had just visited it. In the Lluta Valley some distance back of Arica, it is a few miles south of the railway between km. 92 and 132 of the line. It is best visited from Arica on account of the necessity for arranging in advance to be met by animals at the station Moleno, the terminus of a branch line 54 kms. from Arica. The first bivouac may be made in Cata 27 kms. distant, from which point a day's ride with a steep climb will lead to Socoroma, where night's lodging may be obtained at the village store. From here one may ride down into the cañon at Jamiraya or to Ancolacalla, returning after a night or two at the bottom. Both places are desirable to visit, but it is a day's journey from one to the other, as it is necessary to go to the top and come down again. The finer scenery is at Ancolacalla near which is a beautiful waterfall. It is said that the walls of the cañon rival if they do not surpass those of the Yosemite, being six or seven thousand feet in height, often very steep, the angle varying from 45 to 90°. At the bottom the cañon in places is but two or three meters wide, and at the top from a few hundred feet to possibly a mile. At Jamiraya the ruins of huts add a peculiar interest. The walls, which are of varied and beautiful colors, are

chiefly volcanic rock, with some granite on the floor. *Water should be carried*, as that at the bottom of the gorge is bad. Few covers are needed as in the depths the weather is warm.

Other Bolivian Cities. If more time can be allotted to Bolivia, a week or two may be agreeably spent in visiting the cities of Cochabamba, Potosí, and even Sucre, though that is more remote. The newly constructed railway 125 miles in length, if now open from Oruro to Cochabamba, will make the latter easily accessible. This, called the Garden City of Bolivia, was founded in 1574 in a beautiful valley on the east side of the mountains, here called the Royal Range. Much wealth, culture, and refinement is here manifest, as well as in Sucre, though both cities have been so remote from the rest of the world.

Cochabamba with its suburbs has a population of 40,000 or more; it boasts of six pretty plazas, adorned with trees and flowers, and an *Alameda* with five divisions, a fashionable driveway. There are handsome public buildings and churches; but the scenery and climate are the chief attractions, and a complete recompense for the railway journey from Oruro.

Potosí, a name much more familiar on account of the almost fabulous wealth of which it has been the source, deserves a visit on very different grounds. Not for its delightful climate, smiling skies, and surroundings of placid beauty, but for its historic associations, the remains of colonial grandeur, and for its impressive if more gloomy scenery. From Rio Mulato, 130 miles beyond Oruro, a railway has been recently built to this ancient city 105 miles distant. In 1545 it was founded, after the discovery of the wonderful silver mines, which according to a moderate estimate have yielded about four billion dollars, another writer says one billion, up to the present time. It is related that one man paid no less than fifteen million dollars as tax on the production of his mine, one-fifth being supposed to go to the crown. It is said that 7000 mines have been opened in the Cerro, the hill back of the town, 700 of which are being worked for silver and tin to-day. Great extravagance naturally accompanied the production of great wealth, and many stories are told of the expenditure and display of riches in the early period. At one time the city had

a population of 150,000, now dwindled to about 25,000. It contains many interesting ruins of colonial palaces and churches, including a finely carved tower of the old Jesuit church, notable carved doorways of San Lorenzo, the palace of Don José de Quiroz, and others. The Plaza Pichincha contains a handsome monument to the Independence, and is bordered by several public buildings, the City Hall, and the Pichincha College. A Public Library and Museum are of interest, still more the great Casa de Moneda or Mint covering two blocks.

A visit to the top of the famous Cerro may be made on horseback. A splendid view is enjoyed from the summit. Of extreme interest are the great artificial lakes on the slopes, built by the Spaniards to furnish a constant water supply for the working of the mines. The construction of the thirty-two lakes consumed nearly fifty years, the largest being 3 miles in circumference and about 30 feet deep. Two of them are at an altitude of 16,000 feet. Each is surrounded by five sets of walls, all together about 30 or 40 feet thick. The mines are by no means exhausted and with the opening of the railway, mining operations will doubtless be largely increased.

Sucre. A coach road 100 miles long leads from Potosí to Sucre, the nominal capital of the Republic, which will soon be connected by rail with the region of the west. The city, pleasantly located among the hills at an altitude of 10,000 feet, is noted for its fine climate which must certainly seem agreeable to a resident of the plateau above. In fact many of the wealthy mine owners of Potosí in former days, if not at the present time, made their homes here, where life is much more enjoyable. Made the capital of Bolivia in 1826 it still has the name, though now it is the seat only of the Supreme Court and of the Archiepiscopal See; the Legislative and Executive Departments of Government being at La Paz. The Legislative Palace of Sucre with handsomely decorated halls still remains, there is a stately new Government Palace, a Palace of Justice, the University of San Francisco Xavier, and other important buildings. Among the churches, the Metropolitan Cathedral is the richest in Bolivia. The Virgin of Guadalupe, an image of solid gold, with its rich adornment of jewels, is said to be worth a million. Among the nine

plazas, that of the 25 de Mayo has a special mark of distinction in the fact that it has two streams, one on each side, one of which flowing northward joins the Mamoré so reaching the Amazon, while the other turning southeast goes on to the Pilcomayo and at last to the estuary of La Plata.

One who sees only the plateau region of Bolivia knows but a small part of the country; the section east of the Andes, now becoming accessible, is far more attractive and within a half century may have the larger part of the population.

From La Paz to Antofagasta. The remaining route from La Paz to the sea will be followed by those who have visited any of the three cities last mentioned, the old road by way of Oruro to the southern port, Antofagasta, though not until 1908 was the railway opened between Oruro and Viacha. Many in the past have groaned over the journey which formerly involved two days by diligence to Oruro and three by rail to Antofagasta, but since the introduction of sleeping cars on the old section and the completion of the new the trip may be made in comfort and even with pleasure in 48 hours. Within the year the road has been prolonged from Viacha down to La Paz, another great improvement.

Except for the fine view of Illimani on the left in the early part of the journey, the ride to Oruro is of no great interest. Some tall mud built piers may excite curiosity: a few remaining from those erected three centuries ago which formerly, it is said, marked the entire route from Lima to Potosí. Before reaching Oruro, a ride of about seven hours, a snow-crowned volcanic peak may be seen at the southeast, Sajama, with an alleged altitude of 22,700 feet. A possibility is therefore presented of its overtopping Aconcagua, or like Coropuna turning out 1000 feet lower.

At a station called *Patacamaya* a halt is made for *almuerzo*. Strange to say, the restaurant, where a fair meal is served, is kept by an American and his wife who have been living there about twenty years. The gentleman remarked that he was contented, doing well, and had no desire to return to the States. Fortunate it is that all have not the same tastes, some enjoying the warm tropics, some the desert, some the cool plateau, some happy only in large cities, and others whom the solitary places please. Many who go down to engage in



INDIANS TRANSPORTING FREIGHT



PLAZA AND GOVERNMENT PALACE, ORURO

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railroad construction, to work in mines or smelter, or even to fill office positions in cities, soon become tired and return; others are fascinated with the life, being successful, and persons of more importance than they would be at home, and they are glad to settle permanently in those countries.

Oruro is an important mining town of about 20,000 people, with a very good hotel, the *Unión*, facing the pretty Plaza. Arriving on Wednesday or Saturday at Oruro, one may the same evening at 7.30 take the express train for Antofagasta, a ride of 36 hours. The plateau seems rather dreary and only those who have an interest in mining matters will care to stay over. The various mines on the outskirts of the city produce both silver and tin. There are many foreign residents with several clubs and life is not so dismal as may at first glance appear, although the climate at this altitude of 12,500 feet in the exposed position on the plain is a trifle raw. The Government Palace and the University building face the Plaza, and the city boasts of a theater, a public library and a mineralogical museum, as well as the usual churches, hospitals, and schools. Oruro was noted during the colonial period as next to Potosí in the richness and production of its mines and in 1678 is said to have had 76,000 inhabitants. In the immediate vicinity are half a dozen mines, formerly great silver producers, but now worked chiefly though not entirely for tin. The San José mine, two miles from the town, several years ago was yielding \$55,000 a month in tin and silver. It is an interesting place to visit, employing 1000 or more people and equipped with the best of modern machinery. There are workings 1000 feet deep. The Socavón de la Virgen, nearer the city, is one of the oldest of Bolivia. In all four provinces of this Department are rich tin mines. The ore is treated by grinding and concentration, the product exported averaging about 64 per cent tin. Copper also is found, and farther south borax, and metals of almost every kind.

For the through journey to Antofagasta, staterooms should be engaged in advance at La Paz and in the best possible car; as I was informed that there was considerable difference. Some persons complain about everything and I had heard much of the discomfort of the journey. But the accommoda-

tions which I enjoyed were decidedly superior to those of an ordinary Pullman and I never experienced a more comfortable railway ride. The road is of very narrow gauge, $21\frac{1}{2}$ feet, so that an aisle passes along one side of the car with staterooms in a row on the other. In these the berths are not crosswise of the car as in Argentina but lengthwise. My room had two very comfortable leather covered armchairs, facing each other, on which the berth was later arranged with none above it. A wash-basin with running water was at the side, a small mirror, and several nails on which to hang clothing. In a dining-car good meals, dinner and *almuerzo* were served at a fair price, morning coffee in one's own stateroom. Traveling from Oruro at night one misses the sight of Lake Poopo. Poopo is a curious shallow, salt, and turbid lake with no visible outlet, fed by the Desaguadero River from Lake Titicaca. Although 24 by 53 miles in extent it is at most but 9 feet deep, often less than 5, and seems to be shrinking. In this dry air and strong sunshine the water may in time disappear, leaving only a bed of salt. Uyuni, from which the railway is now being continued to Tupiza, 125 miles beyond on the Pan American route to Argentina, is also passed in the night. From Tupiza it is hardly 60 miles to La Quiaca which was reached by the Argentine Railway several years ago. A few miles from Uyuni are the Pulacayo and Huanachaca mines which have produced within the last quarter century about 5000 tons of silver, thus taking rank as the second silver district in the world (the first is Broken Bow, Australia). Electricity is here the motor power; Corliss engines render service; several thousand men and women are employed, the latter sorting ore with wonderful accuracy. The day following is spent among the desert mountains. The hills are red, yellow, white, and gray, dotted with black cinders. Volcanoes are numerous, mostly extinct but showing perfect cones against the blue of the sky. Large level sheets of saline material are frequent. Some jagged hills have streaks, blood-red or chrome-yellow. The volcano San Pedro, 17,170 feet may be smoking. From a smaller cone, Poruña, at its side, stretches a great stream of lava, like a glacier, half a mile wide and several long, through which in a cutting the railroad passes. Just before dark, close to the Conchi station,

the train crosses a viaduct 336 feet above the Loa River, more than twice as high as the celebrated Forth Bridge. It is a graceful steel structure with six lattice girder spans of 80 feet each, on steel towers. Early the second morning one arrives at Antofagasta.

CHAPTER XVI

THE CHILIAN COAST—ARICA TO VALPARAISO

Arica. Arriving at Arica by sea, or departing as well, one may observe in great white letters on the rocky Morro, *Vive Battalion No. 4*, commemorating the Chilian victory with its massacre of Peruvians, June 7, 1880. The 1700 Peruvians here stationed, whose cannon were directed towards the sea, suffered an assault in the rear from 4000 Chilians who had landed at night several miles below. Short of small arms and ammunition, after an heroic defense for one hour, the commander, Col. Bolognesi, perished having used his last cartridge, and many soldiers leaped to the rocks by the sea, who preferred this death to having their throats cut by the Chilians. Others were crowded off by Chilian bayonets, and for months the bodies were seen below. No prisoners were taken, the entire garrison of 1700 being slaughtered.

The harbor, one of the best south of Callao, is called by one writer the emerald gem of the West Coast, on account of its green trees and other verdure. The line of railway may be seen among the cliffs, and a great cross on the highest hill-top. The town is called by one writer very squalid, by another a neat, attractive place in comparison with most of the port cities, the houses of various colors, blue, green, orange, etc., many with arched entrances affording pleasing views of an inner patio. On account of earthquakes the buildings are chiefly of one story, many of corrugated iron. The most noted of the 'quakes was that of 1868 when two United States frigates were in the harbor. One of these, the *Freedonia*, was lost with all on board; the other, the *Wateree*, by a wave 60 feet high, was carried over houses a mile inland, suffering a loss of half the crew. The ship there became the home of several Indian families, until the next earthquake and wave carried it back to the beach without doing injury to the oc-

cupants. Rarely from the harbor may be had a beautiful sunset view of snow-crowned Mt. Tacora, 19,000 feet, though other mountains are frequently seen. In this port Hernando Pizarro built ships for the invasion of Chile. On the broad beach is a prehistoric cemetery with embalmed mummies, said to be equal to those of Egypt. Some of the eyes are translucent with a rich amber tint, which scientists say are of squid or cuttle-fish here numerous, substituted for the eyes of the dead. It is said that when some of these were sent to Tiffany's in New York to be polished, the workmen suffered a violent irritation of the eyes, lips, nostrils, and throat. Though all recovered, the work was not resumed. An analysis showed animal matter with saltpeter and unknown minerals.

It is believed that along here is a subterranean outlet of Lake Poopo, as the fresh water fish of Lake Titicaca, peccajay, are caught in the ocean, and driftwood of the mountain vegetation appears. Formerly Arica was a great market for vicuña skins, which were brought down from the interior, but their number has now greatly diminished. A highway constructed by the Incas 1000 years ago, called the *camino real*, has been in use ever since, the Bolivians, even after the construction of the railroad to Mollendo, still using it to bring down ore by means of llamas and burros and to carry up supplies. The new railroad may not cause a complete disuse of the old route, as the carriage of freight by a road of so heavy grade is likely to be expensive.

Tacna, 38 miles distant, capital of the province, connected by rail with Arica, is a pretty and a larger city, worthy a visit. The prosperity of this section has been delayed by the friction and hostile feeling between the Peruvian and Chilian Governments and peoples, resulting from the unfortunate war 1879-1883, and the unsettled conditions following. The Tacna-Arica question has been one of greater bitterness than that of Alsace-Lorraine; the present arrangement, to postpone the *plebiscite* twenty-one years, will be greatly to the advantage of both countries. On the desert between the two cities is often an unusual effect of mirage, and from Tacna there is a mountain view of much grandeur.

Iquique. The next important port south of Arica is Iqui-

que, but between the two is *Pisagua* where many boats call, affording opportunity for any who desire, to disembark and go 124 miles by rail to Iquique, thus to see without loss of time something of the rich nitrate lands of Tarapacá. This part of the coast may not look very different from some of the Peruvian, yet it is still more of a desert; for the Peruvian will blossom like a rose, with a sufficient water supply, while this is less easily transformed. In Iquique, gardens and plazas have been made by bringing from a distance artificial soil for the trees, shrubs, and plants, which must be carefully nurtured. The nitrate ports are said to look like western mining towns, with wide streets, and one-story houses made from Oregon lumber, with iron roofs. There are many shops selling much liquor and canned stuffs. The streets were formerly dusty, the air full of sand. Unnatural tastes were developed by the conditions. Two miners in earlier days, wishing to enjoy a feast, sat down with two cans of *pâté de foie gras*, a loaf of bread, a bottle of brandy, and two cans of condensed milk, the last being eaten with spoons as desert.

Hotels, Phoenix 8 to 15 *pesos*, Europa 7 to 15, Grand, 6 to 10, all A. P. *Iquique*, the principal Chilean port except Valparaiso, is the most important center of the nitrate industry. With a population of 50,000, called a fine city, it has an enormous commerce for its size, not merely from the export of nitrates but because it is unique in having all its supplies brought in by sea, food, fuel, and formerly water. The port receives more than 1000 vessels a year. The population is rather rough and hard to govern, though with a circle of aristocratic society, with the usual accessories. The Arturo Prat Plaza with a statue of the hero in the center is an attractive place. One may here first observe women conductors on the street cars, many of whom will be seen in other Chilean cities.

Water, formerly, when brought by sea, 10 cents a gallon and at times \$2.00 when the supply boat was overdue, now comes from the mountains, a distance of 148 miles, by a 10 or 12-inch pipe, partly on the surface of the desert, or buried two or three feet. To Antofagasta water is brought 173 miles from a point 10,700 feet above the sea; to Taltal, 102 miles.

Though expensive, costing millions, it has proved profitable. The streets of Iquique are now piped, hydrants protect against fire, the dust is laid by sprinklers, some people have bathrooms, a few, fountains in patios, a costly luxury. It was once said that people drank champagne because water was too expensive. It is an enterprising community with a good portion of Anglo-Saxons; there are broad streets, fine churches, schools, hospitals, a large theater, pleasant homes, and good Clubs. Some of the people entertain sumptuously, with dinner parties as in London. A broad driveway along the beach leads to Cavancha, an attractive resort with a dancing pavilion, and a choice flower garden tended with utmost care. Halfway is the Jockey Club-house, with race track, tennis, and bowling.

A railway climbs the variously colored mountain back of Iquique to the Pampa of Tamarugal, where it branches to various *officinas*, interesting to visit if time allows. People who are born and have lived in this section can hardly believe stories about grass that has to be cut, and of trees and flowers. A girl of sixteen who had visited Santiago on her return said, "Trees, trees, everywhere, grass growing in a thick mat, and hundreds of flowers! A perfect paradise!"

The valuable nitrate lands which, previous to the war, belonged to Peru and Bolivia are now the chief source of Chile's wealth. Yet it is a curious fact that though Chile receives from her export tax on nitrates the large sum of \$13,700,000 annually, the finances of the country, if they may be judged by the currency, are in a poorer condition than those of Peru, where with a firm gold basis gold and silver coins are used, while in Chile there is paper money of low and fluctuating value.

The nitrate deposits are found in the three provinces of Tarapacá, Antofagasta, and Atacama, along from Pisagua to Coquimbo, about 300 miles. The deposits with an average width of $2\frac{1}{2}$ miles are between the coast hills and the Andes, 10 to 80 miles from the sea, and from 2000 to 5000 or more feet above its level, covering a tract of about 250,000 acres. The deposits, sometimes on the surface, are oftener overlaid with strata of earth varying in thickness and character, occasionally with guano. They are not continuous, but sep-

arated by other deposits, in some places salt. The raw material called *caliche* carries usually from 20 to 65 per cent of nitrate of soda. It is pickled in tanks from eight to twelve hours, the sand and refuse dropping to the bottom. The liquid called *calso* runs off into vats. The salt by-product is used or discarded. When treated and ready for export the article carries 15 to 16 per cent of nitrogen and 36 per cent of sodium. The amount of production is regulated by a syndicate, according to the needs of the world. About 35,000 men are employed, the laborers earning from \$1.00 to \$2.00 a day. These establishments, called *officinas*, are interesting to visit, but it is a gloomy, depressing region for most persons. The superintendents, doctors, and other officials receive good salaries and are supplied with comfortable quarters. \$100,000,000 or more of British capital and some German, is invested here and large fortunes have been made. New nitrate fields recently discovered are held at \$2000 an acre.

The nitrate of commerce is a white cheese-like substance from which the highest grade gunpowder is made; it is also used in chemical works to produce nitric and sulphuric acid, etc., but the bulk of it is employed as a fertilizer, doubling or tripling the harvest. A mineral substance, it is distinguished from guano, the excrement of birds. As to its origin there are various theories, but none is generally accepted. A by-product, a yellow liquor, which in its preparation is drawn off from the nitrate into a crucible, is then chemically treated, poured into smaller pans, and on cooling leaves on the dish a blue crystal, the *iodine* of commerce, which costs as much per ounce as saltpetre per 100 lbs. The casks in which it is placed are covered with green hides which shrink and keep out the moisture. Worth \$700 to \$800 a cask, the iodine is shipped in the treasure vaults with bullion. About 40 per cent of the nitrate goes to Germany, 30 to the United States, 20 to France, the rest to Great Britain and Belgium.

Antofagasta. The next port, 200 miles below Iquique, at which express boats call, is Antofagasta, the terminus of the other railway from Bolivia, *via* Oruro. Here are sea-lions, diving birds, and a considerable town, but no sheltered harbor, in spite of which much commerce is carried on. This, with Iquique, as a poor port, almost rivals Mollendo. One writer

says it is an ugly dun-colored place, another that it is the prettiest town since leaving Panama. It has an air of prosperity with good shops and business houses, a comfortable hotel, the Grand, A. P., 7 to 20 *pesos*, well furnished rooms, and real milk; another says the hotel is very bad. Much depends upon one's disposition, point of view, what he expects, and where he has come from; and you may read exactly opposite opinions of many places and people, as happens even of cities in the United States.

Some steamers call at Caldera, 207 miles south of Antofagasta, with a sheltered harbor, and the oldest railway in South America connecting it with the town of Copiapó; the express boats call only at Coquimbo nearly 200 miles farther and 200 north of Valparaiso.

Coquimbo, at the end of the desert country, a busy port, shipping more copper than any other in South America, is situated at the foot and up the side of cliffs. The country around is very rich in fossils. At Herradura on Horseshoe Bay was found a petrified ichthyosaurus 20 feet long, which visitors are taken to see; they are informed that it is 12,000 years old. Above in the mountains, at an altitude of 4000 feet, is a very sacred shrine, a Virgin of the Rosary, at a small village called Andacollo. During Christmas week pilgrims come by thousands from all parts of the country, even from Peru and Argentina, some walking hundreds of miles. Precious gifts and jewels valued at hundreds of thousands of dollars have been presented at various times.

One day's sail from Coquimbo is Valparaiso.

Chile. The country of Chile is very peculiar; let me hasten to add, in nothing more serious than its shape. It is indeed excessively long and narrow, its great extent from north to south, 18° to 56° S. Lat., a distance of nearly 3000 miles, giving it a remarkable variety of productions and making it larger than any European country except Russia, although it is only from 100 to 300 miles wide. It is peculiar also that in spite of its scanty width, it is divided into three narrower strips, a low Coast Range, a longitudinal valley or plateau, and the high range of the Andes. With practically no rain in the north, it has a gradually increasing rainfall towards the south, till near the extremity there is rather too

much. The northern part is the nitrate and mining section: the central and larger part is an agricultural zone of great possibilities, with good pasturage area; while farther south is an excellent forest region. There must obviously be a great variety of scenery as well as of climate, so that in one section or another all tastes may be gratified.

Chile was first invaded by Europeans soon after the founding of Lima in 1535. To Pizarro, Charles V, on hearing of the conquest, had given the country seventy leagues south of that previously bestowed; to Diego de Almagro the two hundred leagues beyond. In which section lay Cuzco was a matter of dispute. Pending its settlement Almagro decided to conquer the remainder of his province. That this region was richer in gold and silver than Peru was doubtless a tale of the Incas to distract the conquerors for their own advantage. However, with an army of Spaniards and some Indian captives, Almagro set out over the Bolivian plateau to investigate and take possession of the unknown country. On the barren heights they suffered hunger, cold, and mountain sickness, the difficulties of this terrible journey in many ways surpassing those of Hannibal and Napoleon in crossing the Alps. Failure and disappointment were the only results of the expedition, which was followed by the execution of the gallant leader after his return to Cuzco.

In spite of Almagro's disastrous experience, a second expedition was inaugurated by Pedro de Valdivia, who proceeded along the desert shore, instead of over the plateau, and after arriving at Arica, there constructed vessels to pursue the journey. With no great loss, in December, 1540, he reached the valley of the Mapocho, and selecting a favorable site, on February 12, 1541, he proclaimed a new city: *Santiago*, for Spain's patron saint, *de la Nueva Estremadura*, from his native province. On the Plaza de Armas was built a small chapel and a *Cabildo* or Municipal Council Chamber, as well.

Still unsatisfied Valdivia pursued his explorations southward, beyond the Bio-Bio River. In his absence the small garrison he had left behind barely escaped destruction, being saved only by the valor and boldness of the solitary woman in the party, Doña Ines de Suarez. The Araucanians, the most powerful tribe in this section, were of different caliber from the Quichuas, and long and fiercely they continued the struggle against the invaders, who treated them with barbarous severity. After the founding of Concepción, Imperial, Villa Rica, and Valdivia, and the settling of the conqueror himself at the town of Concepción, the Indians under the command of Lautaro, who as a servant of Valdivia had learned

something of Spanish methods, attacked and defeated the Spaniards, capturing Valdivia and putting him to death with tortures. After long-continued warfare a truce was established, with the Bio-Bio River as the boundary line, but for two hundred and fifty years the contest went on for the subjugation of the natives. At last, when the Chilians rose against Spain, the Araucanians lent assistance, and friendliness was established. As in other lands, however, civilization of a sort proved too much for the Indians and few of pure blood remain.

On the 16th of June, 1810, the movement for independence began with the abdication of the Governor, Carraseo, on account of difficulty between himself and the *Real Audiencia*. September 18, 1810, the *Cabildo* or City Council in open session elected a *Junta* to govern until a National Congress should be convoked, ostensibly for the purpose of holding the dominion for King Ferdinand, deposed by Napoleon. The people regarding this as the birth of their independence were filled with joy. An army subsequently sent from Spain landed at Concepción, marched northward recruiting royalists, and after several engagements finally put to rout the patriots, who were commanded by Bernardo O'Higgins assisted by Colonel Juan Mackenna. October 16, 1814, General Osorio with the Spanish army entered Santiago and there maintained Spanish rule for three years longer. General O'Higgins meanwhile fled to Mendoza in Argentina to join the army which was being organized in that city by General San Martin for the expulsion of the Spanish power from the entire continent. Three years were required for this work. In January, 1817, the invasion of Chile from Argentina was begun by a well-drilled army of 5000 men, 1600 horses, and many pack mules. One division came by the Uspallata Pass, along the coach route across the Cordilleras, and the one followed by Almagro almost three centuries earlier. A second division under San Martin came by the lower Los Patos Pass. The two divisions, having united on February 12, gained a complete victory over the royalists in the famous battle of Chacabuco, and February 14 entered Santiago. The enthusiastic and grateful Chilians now offered to San Martin the governorship of the country. This unselfish patriot declining the honor, an assembly, February 17, appointed General O'Higgins Dictator, thus concluding the so-called Reconquista or Reconquest of Chile. However, troubles were not over. The Viceroy of Peru sent General Osorio again to Chile. Landing at Talcahuano in the south he was able to advance with his army, after defeating O'Higgins, until he approached Santiago; but on the plain of Maipo, April 5, 1818, San Martin again gained a

decisive victory. Meanwhile on the anniversary of the battle of Chacabuco the Act of Independence was read in the Plaza of Santiago, and the oath was taken by the leaders. The United States was the first nation to recognize the Republic. A navy was soon formed and with the aid of Admiral Lord Cochrane, a squadron of eight warships and sixteen transports in 1820 carried north the army of San Martin for the conquest of Peru.

In 1823 General O'Higgins was obliged to resign his Dictatorship and a period of confusion followed. In 1833 a constitution was adopted. In the administration of Manuel Montt in the fifties railway construction was inaugurated. In that of President Pinto occurred the War of the Pacific with Peru and Bolivia, 1879-81, though the treaty of peace was not signed till 1883, when the province of Tarapacá was ceded to Chile, and occupation for ten years was arranged for Tacna and Arica. About the same time a boundary treaty was concluded with Argentina, with which nation Chile had been on the verge of war. Balmaceda, elected President in 1886, instituted many reforms but by his arbitrary methods brought on civil war. A victory by the constitutional party was followed by Balmaceda's suicide.

The unfortunate death of the able President Montt in 1910 was succeeded by the election of the present incumbent, Ramon Barros Luco. Among the prominent Chilean families (it has been said that one hundred of these govern the country), are many British names, the forbears of these having married into the best Spanish American families and become patriotic citizens of their adopted country.

CHAPTER XVII

VALPARAISO

HOTELS. Royal, A. P., 12 to 25 *pesos*; Grand, A. P., 10-15 *pesos*; Palace, about the same or a trifle less; Colon, 6 to 12 *pesos*. All higher in summer.

Money. The Chilian *peso*, paper, varies in value from 20 to 30 cents or more; recently it was 22 cents.

Chief Points of Interest. The Monument and the Government Palace near the landing; the business streets; Plaza Victoria and the church facing it; the Av. Brazil with the British Monument; the Naval School; the English and the Spanish American Cemeteries on the heights, these with the Naval School reached by ascensors; and the suburb Viña del Mar.

Valparaiso, Vale of Paradise, the largest and busiest port on the Pacific south of San Francisco, like many others along this coast, has no real harbor. The spacious semi-circular roadstead lies open to the wintry northers which occasionally bring terrific storms. On such occasions, ships at anchor in the bay to escape the fury of the waves often steam for the open sea, lest they be driven ashore or be overwhelmed in the deep, as has several times happened to ocean steamers. In the summer there is no danger, and after the completion of the breakwater designed to protect the bay from the savage force of the tempestuous sea, it will be safe at any time. The great depth of the water a short distance from shore renders the construction difficult, but satisfactory plans at length were devised and in October, 1912, work was begun on the port improvements which besides the breakwater 945 feet long will include additional docks. Those in existence are sadly inadequate for the vast commercial movement at this port.

While from a business point of view the harbor at present is poor, from the deck of a steamer or from the hills above the

town, there is a busy and beautiful scene. Scattered over the waters are hundreds of vessels of various shapes and of every size, some from the farthest corners of the globe, showing flags of many nations (probably none of the United States), others mere lighters or rowboats to transport freight or passengers from ship to shore. Around the bay, a few rods back from the water, rise in a semi-circle steep hills or cliffs to a height of 1000 feet or more. Farther back, more lofty ridges are seen, and it is said that on a clear day in the far distance may be descried, in the sharp toothed ridge which forms the backbone of the continent, the snow-flecked peak of Aconcagua.

On the narrow strip of shore between the sea and the hills, varying in width from two blocks to half a mile, is the substantial business section of the city; while climbing up the slopes and crowning the hilltops is most of the residence portion, both the fine dwellings of the prosperous and the humble homes of the poor.

The arriving steamers are as usual beset by a throng of boatmen, and wary must be the tourist who is not exorbitantly fleeced, unless he has a friend on board to guide, or one from the city to greet him. As the Chilean *peso*, of somewhat variable value, is generally worth less than a quarter of a dollar, the tariff price is not so high as it sounds; one *peso* for each person or considerable piece of baggage is a suitable fee, though much more is likely to be demanded.

At the landing, arrangements may be made for the transport of the heavy baggage by cart, while you go with hand baggage to the hotel in a carriage; or a tram car may serve you. The hotels, the Royal, Palace, and Grand, are all within half a mile of the landing. The Royal Hotel, 65 Esmeralda street, which is sometimes full to overflowing, will be found amply satisfactory. The American proprietors, Mr. and Miss Kehle, have made it more like a hotel in the United States than are any others that I have seen on the West Coast. Located on one of the principal business streets, it affords excellent meals in several large dining-rooms; and handsomely furnished chambers, with modern equipment including red satin puffs for the beds in addition to fine blankets. The price is from 12 to 15 *pesos* and up according to the room. The

DRY OF
CHILE



VALPARAISO HARBOR



MONUMENT TO ARTURO PRAT, PLAZA INDEPENDENCIA

Grand Hotel is said to afford similar accommodations at about the same prices. The Palace, a little cheaper, is well situated on the Plaza de los Bomberos, and others less pretentious, as the Colon, 87 Esmeralda, are called clean and good.

In Valparaiso, a city of nearly 200,000, it seems to be the fashion for the residents to reply, when asked what there is to see, "O, nothing at all." This is by no means true, though at least twice as much time should be devoted to Santiago. First there is the large square near the landing on which is the handsome Casa del Gobierno. In the center of the plaza is a fine monument, *The Country to the Heroes of the 21st of May*, and at one corner near the docks is the railway station to Santiago. The air seems crisp and the city more European than any previously seen.

The business streets have many handsome buildings two or three stories high, a few even more, looking fresh and clean, since the greater part of this district was laid low by the terrible earthquake of 1906. A twelve-month of unusual shrinkage, of adjustment of the earth's surface, and of consequent calamity was practically coincident with this year. In April 1906 occurred the catastrophe at San Francisco, August 16, the practical destruction of Valparaiso, and in January, 1907, the disaster at Kingston. Some buildings in Valparaiso withstood the shocks, but with the 'quakes and the resulting fires little of the lower part of the city remained undamaged. The upper town was to a great extent uninjured and the shipping in the bay received no harm. Few traces of the calamity are now left, as like San Francisco the town was soon rebuilt in a superior manner. While slight earthquakes are frequent they are not fearsome, as heavy shocks are usually half a century apart. Besides earthquakes, Valparaiso has experienced other calamities. Founded in 1536, in its earlier days it was three times captured and sacked by pirates; in 1858, it was destroyed by fire; in 1866, bombarded by a Spanish fleet; and in 1890 it suffered considerable injury from the Balmaceda revolution. It is to be hoped that after all these vicissitudes it may enjoy a peaceful existence. A stroll along the principal streets to the office of the American consul, Mr. Alfred Winslow, to the banking house of

W. R. Grace, and to gaze at the handsome shop windows is the pastime of an hour or two. Between the hills and the water it is impossible to lose one's way. The double-decked tram cars are an imposing sight, and rather curious objects are the women conductors. Having heard of these before arriving, I was expecting to see some trim young women, with possibly a coquettish eye turning at times upon some of the gentlemen patrons, as occasionally happens in some of our cheap restaurants; but no! Staid indeed are the women conductors in Valparaiso and Santiago, and far from handsome. Plainly dressed in a sort of blue uniform with white aprons, they are obviously of the so-called laboring class, of rather stolid appearance, perhaps the mothers of families, and closely intent upon their duties. It appears that during the war of '79-'81, so many young men joined the army that women were drafted into this service. Performing it in a satisfactory manner they continued to be so employed though not to the total exclusion of men. They mount to the upper story to collect fares and in Santiago swing along the sides of the open cars quite in man fashion, though necessarily hampered by their voluminous skirts. Manifestly competent for the labor, less difficult than other duties like scrubbing floors, supposed to lie more within their sphere, it would seem that bifurcated garments, even knickerbockers, would enable them to perform either service more easily. If men and women were to exchange garments for a hundred years it is conceivable that the idea as to which is the weaker sex might be changed also.

A few car rides may be taken to advantage, the greater if sitting above; but among the natives of the upper class this is taboo, as the price is only half of that below; the fares being five and ten *centavos* respectively. A gentleman in Santiago remarked to me that although he preferred riding outside it would never do except in the evening, when he could not be recognized from the street or from the upper windows of houses in passing.

Not far from the Royal Hotel is the *Plaza Victoria* on one side of which is the Espiritu Santo Church, the most fashionable in the city, though with an ordinary exterior. A flower market is passed on the way, where beautiful roses and other

flowers may be purchased in quantities for a single *peso*. The general market as a matter of course is worth seeing, especially in the season of fruits, as Chile rivals California in the excellence and variety of these, and surpasses it in cheapness. The fruits of the Temperate Zone, cherries, peaches, apples, pears, and grapes, luscious in quality and, *they say*, unrivaled in any part of the world, in their summer and fall, tempt the tourist on every hand.

It is important to ascend the hills in two or three different places, both for the view going up and for what is to be seen at the top. The ascensors are similar to those of Cincinnati, one being carried up by cable as another is coming down; but the inclines seemed steeper and one appeared rather rickety. There *have* been fatal accidents. However,—I went as do others. Near the top of one of the inclines which is but a short distance from the Hotel Royal is a *cemetery* where chapel-like tombs and pretty head stones and monuments are closely packed together among shaded walks on the very edge of the precipitous bluff. One has here a magnificent view of the city below fringing the semi-circular shore, of the blue waters, alive with ships, and of the surrounding hills. Through cañons here and there separating the various hills and bluffs, a few carriage roads wind steeply upward and more footpaths, by which some pedestrians climb; but most persons will prefer to save time and strength by taking their chances in an ascensor. Perched on these steep inclines are houses of the poor, while at the top are many fine villas occupied by native and foreign residents. Close to the Chilean cemetery on the bluff is the *English burial ground* surrounded by a high wall. In a far corner of this enclosure is a small *marble tomb* on a concrete foundation with a marble cross above, the whole about five feet high, in which Americans will have a special interest. The inscription reads:

“In memory of the officers and seamen slain on board the United States frigate *Essex* in this harbor in an engagement with H. R. Majesty’s frigate *Phoebe* and brig *Cherub*, February 28, 1814.” A list of 52 names follows and the statement that it was erected by officers of four ships of the United States Navy.

This ship, the *Essex*, commanded by Capt. David Porter,

after inflicting much damage on British property, capturing 360 seamen and 100 cannon, was surprised in this harbor by two British ships. Though disabled by a squall she made a splendid fight until more than three-fifths of the crew were killed or wounded, and the ship was on fire in several places, when she struck her colors. A more conspicuous monument for the gallant dead might seem appropriate.

By another ascensor, a trip should be made to the *Naval School*, which crowns a splendid height nearer the outer edge of the harbor. A fine large building, well equipped in the best modern English fashion, stands back of a pretty garden. There are good class rooms, laboratories, machine shops with guns mounted as on board ship, and all essentials for a thorough and practical course of study. In the rear patios are athletic fields with bathing facilities. The cadets are generally from the best families, and the program of study is based on that of English schools; the fleet is organized on the British model, and the ships are constructed in British shipyards. There is, further, a training ship for sailors, where if unable to read and write they receive instruction, as do soldiers in a corresponding institution in Santiago.

On the fine broad Avenue Brazil is a handsome arch with the British Lion above, presented to the city by the British colony here, at the Centennial in 1910.

Viña del Mar. An excursion should by all means be made to this suburb; to Miramar if time allows. The former may be reached by tram or train in half an hour or so. It is pleasant to go by one and return by the other. The tracks, nearly parallel, pass several pretty suburbs and give several glimpses of the sea beyond the harbor before reaching the destination. Viña del Mar is not only a suburb of Valparaiso whither many Englishmen and others go in the afternoon for sports, and where many business men of Valparaiso have homes, but it is also a fashionable summer resort for the wealthy residents of Santiago and other parts of Chile. It is a charming place with a pretty railway station near a large and attractive plaza. Many carriages stand near, in one of which for a few *pesos* a pleasant drive may be taken around the town and out to the hippodrome or race track, a mile or more outside the city. Within the track enclosure, a pretty

1914. 05
California



AVENIDA BRAZIL, WITH BRITISH MONUMENT



RESIDENCE VINA DEL MAR

spot surrounded by green hills, the foreigners have laid out a golf course, grounds for cricket, and for football. The place is thus visited, especially on Sundays, by many, not only for the races, to which the Chilians are as devoted as the Argentines, but for athletics of various kinds. The Chilian horses seem very large after those of Peru, and trotting is their specialty. Some of them do this so well that their gentle trot is as easy as the lope or canter of most other animals.

A pretty and commodious clubhouse faces the Plaza, and near by are many charming villas of attractive architecture surrounded by luxuriant vegetation of tropical and temperate climes, beautiful flower beds, trees, and shrubbery. Half a mile from the center of the town is a fine beach bordered by jutting rock promontories. Large bathing establishments, cafés for ices and tea, and splendid villas with well laid out grounds recall our own shore resorts. A good pedestrian may be tempted to climb over the steep enclosing hill and descend on the other side to the electric car track for his return to the city. The *Grand Hotel* with beautiful grounds is the leading hostelry of the place.

Miramar is a small but popular bathing resort in the opposite direction from Valparaiso, reached by electric cars; but the bathing is here more dangerous, as not far from shore the bottom drops suddenly to a great depth.

From Valparaiso to Santiago by rail is a ride of $3\frac{1}{2}$ or 4 hours by express trains and about two more by accommodation. The price of tickets for the express is 12.80 *pesos*, 4 extra for seat in Pullman; 8.50 *pesos* by slower train. It is a pleasant ride, for a few miles near the shore, passing Viña del Mar, then east through the Coast Range to the Central Plain, at Llai Llai leaving the Andine Railway to turn southward to Santiago.

CHAPTER XVIII

SANTIAGO

HOTELS. Oddó, A. P., 12 to 40 *pesos*; Grand, A. P., 12 to 18 *pesos*; Francia, and Royal, about the same; others at lower prices.

Chief Points of Interest. Plaza de Armas; Cathedral and other buildings around; the Capitol; the Moneda; the Alameda; Parque Cousiño; *most important*, Santa Lucia Park and the Cemetery; the Art Gallery.

Santiago, the capital and largest city of Chile, the third or fourth in size in South America, considered by some travelers to have the most beautiful location of any capital in the world except Rio de Janeiro, is situated on the river Mapocho in the long central valley of Chile, at an elevation of 2000 feet. Founded by the doughty warrior and Spanish invader, friend and almost counterpart of Francisco Pizarro, Pedro de Valdivia, it was by him planned and laid out in 1541 after he had first built a fort on Santa Lucia hill, an excellent site for the purpose, recalling the ancient Greek Acropolis or some of the mediæval strongholds. On account of the too great dispersion of the invaders, the settlement for some years had a hard struggle for existence, but during its century of independence it has grown rapidly. Its population, now approaching 400,000, is ten times as great as when independence was declared in 1810.

The site is indisputably one of remarkable beauty and picturesque charm, without any interference with the convenience of a large city. The hills in and on the edge of the city, rising like small islands abruptly from the plain, do not preclude long level streets, yet form a peculiar and admirable embellishment, while east and west, the mountains of the Great Cordillera and of the Coast Range, which a few miles

away rise as lofty ramparts to the ethereal blue, are an ever sublime and noble contrast to the verdant smiling plain.

The climate of Santiago, which at 33° S. has about the same latitude as Charleston and San Diego N., is considered excellent; though the three winter months, in dwellings destitute of heating apparatus, seem rather cool indoors to residents of the United States. In the summer, though not extremely hot, it is very dusty, so that wealthy residents at this season escape to Viña del Mar or other seashore resorts, to the beautiful lake region, to the springs and baths among the mountains, or even to the *fjords* in the distant south. An amusing *mot* of a German is related by one who did not seem to appreciate it. "The climate of Santiago is good but it is very unhealthy." And both statements have been quite true, the latter inexcusably so, resulting from the fact that ordinary sanitary measures have been neglected. The medical congress in 1911 was held in the midst of an epidemic of smallpox. There has been a woeful lack of sewerage. But happily the officials have at last come to realize the importance of sanitation, an adequate system of sewerage is now installed, and doubtless other deficiencies will soon be remedied.

From the fine large railway station on the outskirts of the city, a carriage or tram car may be taken to one of the hotels near the center, a mile or more distant. To secure rooms at the *Oddó*, for many years regarded as the leading hotel of Santiago, it is often necessary to engage rooms in advance, as both main building and annexes are generally crowded. The *Oddó*, near the Plaza de Armas, is on one of the principal streets, the *Ahumada*, 327, the annexes on another at right angles with this, the *Huérfanos*, 976 and 1012, all three in the heart of the city. The *Grand Hotel*, preferred by some, is close by, *Huérfanos* 1164. Other hotels approximating these are the *Hotel Francia*, finely located on the south side of the Plaza, and the *Royal*. Prices at the first two are likely to be 15 or 18 *pesos* a day, with morning coffee, one *peso*, as an extra. Other hotels of more modest price and accommodations are the *Fornos*, *Brinck*, *Frances*, and *Imperial* on the *Alameda*, the *Milán*, *Estado* 130, the *Biarritz*, and near the station the *Meloossi*.

At the Oddó Hotel, a surprising and pleasant custom in 1911 was that morning and evening the newspapers, *El Mercurio* and *Las Ultimas Noticias*, were thrust under the door of my room, the first in time to enjoy with my morning coffee. Whether this was by the courtesy of the hotel proprietor or the newspaper management (both papers having the same publishers) I am unable to state. Rather expecting to find them charged on my bill, I was agreeably disappointed that they were not. To the tourist coming down the West Coast the newspapers of Chile are a surprise. Those of Peru and Bolivia though often with able editorials are small, and contain but a modicum of foreign news, especially of the United States; and the little there is from our own country is largely gossip. But in Chile, as on the East Coast, it is different. The *Mercurio* is a newspaper of world-wide reputation and of advanced age, exceeded by few in the United States. Originally founded in Valparaiso in 1827, a Santiago edition was started in 1900, the two papers now being published with the same editorials, cables, and general news, though differing in local matters. The proprietor is Mr. Augustín Edwards, a member of a wealthy banking house and a large owner and president of the Compañía Sud-Americana de Vapores. The buildings in which they are housed, and the *contents* of these papers are superior to most of those in larger cities of the United States. Besides good quarters for editors, reporters, and other employees, there are dining, reception, and assembly rooms, bed and bath rooms, and other features not found in our establishments. The editors are cultivated, well informed gentlemen, whose well written editorials on the chief topics of the day are read and become subjects of daily conversation among men of the upper class. More news in regard to foreign countries is printed than is usual in our metropolitan dailies. Distinguished strangers are interviewed, social life receives attention, commercial matters, sport, science, and literature all have their place. *Las Ultimas Noticias*, an evening paper with the same publishers, is of lighter character. Besides other good though less known dailies, Santiago has illustrated weeklies, the *Zigzag*, and *Sucesos*, containing a record in pictures of the week's happenings, cartoons and photographs of local and of world-wide interest. These

are in compact magazine form of slightly less size and thickness than our monthlies.

Sight-seeing in Santiago naturally begins with the *Plaza*, the center of which is beautified by palm, orange, and fir trees, grass, fountains, and flower beds, among which are broad walks and benches. From the usual band stand Sunday, Thursday, and Saturday evenings concerts of good classical and operatic music are given, in summer from eight to ten p. m., in winter from six to seven. In the center of the Plaza is a statue by a famous Italian sculptor, Paganaro, which represents Liberty breaking the chains of (Spanish) Slavery. The four crocodiles beneath with their mouths open indicate that this was originally intended for a fountain.

Around the Plaza are buildings of importance; on the west side, the *Cathedral*, originally constructed of stone on the site which Valdivia appointed for the first church to be erected in Chile. If the outside is not remarkable the interior is vast and imposing. On each side of the nave are large square pillars with images of Saints and Apostles. In the usual side chapels are various paintings by old masters and other objects of interest; a reclining life-size figure of San Francisco de Xavier, carved from the trunk of a pear tree, is considered of high artistic merit. This work was found in the monastery of the Jesuits when that Order was expelled from Chile in 1776. Another chapel on the same side, that of Santo Sacramento, contains a monstrance and altar of beautifully wrought silver more than two hundred years old, and also an antique, large swinging silver lamp. The choir stalls in the chancel are as usual of carved wood, also the throne of the Archbishop. In the sacristy is a large oil painting of The Last Supper, of the old Spanish school, and a crystal chandelier which hung in a room where the first Congress assembled, now the National Library. In the Cathedral are buried the three archbishops, the first, Señor Vicuña Larraín, consecrated in 1841. The tomb of the second is noteworthy, elaborately carved of Carrara marble, with fluted columns and trailing vines, and the reclining figure of the archbishop in his stately robes. In front crouches a bronze lion. The stained glass windows deserve attention. The particularly fine organ is said to be equal in tone to that in St. Paul's,

London. It came here by accident, being on its way to Australia in a ship which was wrecked in the Straits of Magellan. Among the salvage was the organ which, purchased at a bargain, was brought to Santiago. The Cathedral should be visited at the earliest opportunity, as much of the time it is closed. Also it is to be observed that there is a strict rule here, rigidly enforced, against wearing hats into the churches. Unless a lady does not mind removing hers, it is well to devote a morning to the churches, wearing a lace scarf or veil over the head and thus having no bother. Next to the Cathedral is the Palace of the Archbishop.

On the north side of the Plaza at the corner next to the Cathedral is the *Post Office*, a modern well equipped structure, the telegraph office, and the *Palace of the Provincial Governor*. On the east side is the *Portal McClure*, back of which are many shops, and the *Valparaiso Restaurant*, said to be good. The *German Club* is above the restaurant. Under the *portal* are many venders, as also on the south side of the Plaza under the *Portal Fernandez Concha*, where especially are fruit and flower stalls: beautiful roses, jasmine, heliotrope, etc., grapes, figs, paltas, chirimoias and other fruits, according to the season.

Santiago is a city generally pleasing to tourists, even delightful, as one traveler asserts, who calls it the best place in South America for residence the whole year around and the only one attractive from a scenic, climatic and social point of view. This very critical writer who seems to have a special "grouch" against Rio de Janeiro, after seeing Lima revises his opinion to a degree, then declaring that only Buenos Aires, Santiago, and Lima appear desirable places to live in and of the three he rather prefers Lima. *Per contra*, another great traveler who stayed in Lima not long enough really to see it, from his superficial view thought it much over-rated, this showing, with a possible difference in taste, the error of a too hasty judgment.

But not to make undue comparisons, Santiago is a charming city, much larger, obviously, and more modern and European than cosy and courtly Lima, or strange and remote La Paz. Its attractions will surprise many and all will be loath to leave.



NEW HALL OF CONGRESS, LIBRARY AT THE LEFT

It has a fine system of electric cars with a device which in our cities might be adopted to very great advantage. The cars of the various routes, in addition to the names of streets or destinations which they bear, are all numbered, with figures at the top large enough to be visible for a block or two. On the calle Ahumada you will see cars numbered 15, 17, 20, 24, etc. Should you wish to go to the Park, you may take No. 19 on Huérfanos. The hotel people or any resident will tell you what cars you may take and where, for any given point, or you will find a complete list in Scott's Guide Book.

After seeing the Plaza, one may take No. 19 there for Parque Cousiño, or a cab or automobile for a drive about the city. In 1911 the paving on many streets was so rough that the cars were preferred by many; yet one conversant with the city could for the most part keep to smooth roadways and visit nearly all sections.

The business quarter of the city is chiefly between the Plaza and the Alameda, extending also to the west. All of these streets are rather narrow with a single car track on one side, the cars as in Lima going by one route and returning by another to the starting point. In this section are many excellent shops of all kinds, the hotels, banks, and the government buildings. Of the last the *Capitol* is naturally the finest, occupying a whole square a little west of the Cathedral. On two sides of this large handsome structure are beautifully kept gardens, with magnolias, heliotrope, and other flowers. In the garden on the east front is a *beautiful marble madonna* in an attitude of mourning or prayer, with four kneeling angels at her feet. An inscription records that this is a memorial to the victims of the fire, December 8, 1863, witness of the undying love and grief of the people ten years later. The church of the Jesuits, then consumed with 2000 victims, formerly stood on this spot.

Of the four entrances, this on the east is to the *Cámara de Diputados* above, that on the west to the *Cámara de Senadores*. Both Chambers are like small theaters with four rows of seats raised one above another, each with a small table and writing material in front. There is a high carved dais for the President. A dome of colored glass forms the roof. In the Senatorial Chamber is a painting by Valenzuela Llanos

representing the first Congress, July 4, 1811, held in the National Library near by. The building has wide marble staircases, rooms for the President, for secretaries, some designed for discussion and conversation; also a large handsome *Congress Hall* where the President reads his message at the same time to both Houses, and to the Diplomats. To the two galleries of the hall, friends are admitted by ticket for the opening of Congress, an impressive and ceremonious occasion. This building is heated by steam pipes, a wonderful innovation, making it comfortable even to Americans.

The official residence of the President is in the *Palacio de la Moneda* which contains also his offices and those of the Ministers of the Interior, Finance, and Foreign Relations, as well as the quarters of the Mint. This building, between the streets Morande and Teatinos, faces the *Plaza de la Moneda*, which is ornamented with fountains and flower beds, and a statue of an able Minister, Don Diego Portales, noted for his uprightness. The Palacio with its two large patios occupies an entire square. By a curious mistake plans designed for a Government House in Mexico City were sent here, and so pleased the Chilians that they decided to use them. Opposite the Palace on the north side of the Plaza is the *Ministry of War and Marine*; on the west side is the *British Legation*. The *United States Legation* is well located on the Alameda. On the east side of the Palace on Morande street, facing the entrance to the Mint is the *Ministry of Public Works*. On the Plaza Moneda band concerts occur Tuesdays and Fridays at the same hours as those on the other Plaza.

The most notable street in the city is the *Avenida de las Delicias*, commonly called the *Alameda*, a beautiful park-like promenade 600 feet wide, extending four miles from beyond the hill park, Santa Lucia, to the Quinta Normal and Central Railway Station. Here formerly was the river bed of the Mapocho, now farther to the north. The transformation was due to General O'Higgins. The central parkway has four rows of trees, oaks, elms, acacias; little canals of running water and many monuments of soldiers, statesmen, and scientists of Chile. Next to the parkway on each side are electric car tracks, and beyond, broad boulevards for carriages, bor-

dered by wide sidewalks and many handsome residences. Near the calle Ahumada stands a monument to the brothers, Miguel Luis and Gregorio Victor Amunátegui, the elder, a patriot of marked distinction in civil life who served as Minister under several administrations. A remarkable speaker among people distinguished for their oratory, he died in 1888, greatly mourned.

Proceeding down the Avenue one passes a bust of Abate Molina, a noted naturalist and author of the eighteenth century. A Natural History of the Country of Chile was his chief work. There follows a bust of José Miguel Infante, a great philanthropist who was one of the foremost in the struggle for independence.

Next is the most striking of the memorials in the Alameda, a bronze statue of General Bernardo O'Higgins on horseback, represented as on his famous retreat from Rancagua. Bernardo, born in Chillan, Chile, and educated in England, was the son of an Irishman Ambrose O'Higgins who after living some time in Spain settled in Chile, where he was made Governor in 1778. Bernardo entering the army in 1813 became commander, and as previously related took part in most of the revolutionary struggles, later becoming Supreme Dictator. In spite of an excellent administration, after a few years he was requested to resign, which he promptly and patriotically did, then withdrawing to Peru. Some years later, influenced by President Bulnes, the Chilians tardily recalled the disinterested patriot and were preparing to receive him with due honor when, as about to set out on his return, in 1845 he died. In 1868 his remains were brought back by a Commission of the Government and interred in the General Cemetery.

A little farther, on the left, stands a life size figure of Carrera, José Miguel: the most noted of three brothers, ardent patriots in the struggle for independence, but of misdirected zeal; all three executed in Mendoza by the Argentines, José, the last, without a trial, Sept. 4, 1821. The bodies of the three were by order of Congress brought in 1828 to Santiago and buried in the Compañía Church.

Some distance beyond is the monument of another general and dictator, Don Ramon Freire, also distinguished in the

War of Independence and called by O'Higgins, the bravest of the brave. Later engaging in civil war and being defeated in the battle of Lircay in 1830, he too went to Peru, but returned before his death in 1853.

The next monument, between calles San Martin and Manuel Rodríguez, is to the great hero who is honored in every city, General San Martin, sometimes called the Hannibal of the Andes. Though receiving scant honor in his later life, after his death in 1850 his memory was cherished. This bronze equestrian statue, erected by public subscription in 1863, represents the hero holding a flag which is surmounted by a small figure of Liberty.

Beyond this point, the Alameda is still wider, with flower beds and shrubs beautifying the central promenade. On the right is a statue to the grandson of an Irishman, Don Benjamin Vicuña Mackenna, a distinguished historian who initiated many important works for the improvement of the city: the enclosing with stone embankment the Mapocho River, the adornment of Santa Lucia, and the idea of encircling the city by a belt of trees to prevent straggling and undue extension. His death occurred in 1889.

Between the streets Ejército and Almirante is a statue unusual if not unique in character, being erected by the citizens of Santiago in honor of the city of Buenos Aires. The last monument is an obelisk to the memory of four writers of the Revolutionary period.

CHAPTER XIX

SANTIAGO—CONTINUED

IN all Spanish American countries the parks are an important feature. In some respects the most beautiful, and one absolutely unique in character, is that of *Santa Lucia*, which, however highly praised, is almost certain to surpass expectation. The last of a row of detached hills, it made in the early days a splendid stronghold against the Indians. When no longer needed as a fort it became a quarry, then a burial ground for Jews, infidels, and Protestants, whose bones would have defiled the consecrated ground of the Catholic Cemetery. But in 1872 these were removed to the new Protestant Cemetery by the side of that occupied by the faithful, and the hill was converted into a wonderfully beautiful park. About three-quarters of a mile southeast of the Plaza de Armas, it is a pleasant walk, or it may be reached by several lines of cars. Covering a surface of six or seven acres it rises in irregular, jagged, sometimes perpendicular walls, gradually narrowing to a pavilion-covered summit 400 feet above, whence on a clear day, and especially at sunset, there is an enchanting view. The city is spread out below, distinct in every feature, surrounded by the broad expanse of fertile plain 40 miles long and 18 wide, fringed by ranges of steep hills and mountains, the latter on the east snow-crowned and forming a splendid rampart 15,000 feet tall. Aconcagua, visible from the sea and from Valparaiso, is unseen here on account of the nearer approach to the lower peaks in front, behind which it disappears from view. As often as time permits will those who delight in nature's beauty climb this hill (splendid exercise, too) to see the sunset glow on the snow-capped mountains, especially when a slightly clouded sky gives assurance of lovely hues and the certainty of a truly enchanting scene.

Almost as beautiful to look at as to look from is this Cerro

which natural and artificial charms render unique among all cities. Embellished by public and private munificence, especially by Benjamin Mackenna, the hill is a mass of green and blossoms, luxuriant graceful vines, shrubs, and trees, among which are glimpses of stairs and roadways, rock cliffs and walls, towers and battlements, chapels and monuments, the whole a combination of exceeding loveliness.

The most imposing entrance to this hill park is from the Plaza Vicuña Mackenna near the Alameda, where stands a recently erected statue of the gentleman, a fine bronze figure, at its foot a seated Fame holding in her hand a wreath of laurel. Entering the carriage drive (fee 5 *centavos* for a pedestrian, 40 *centavos* for a carriage) a large brass plate may be noticed, a memorial to Mackenna, here placed by the city. On a great boulder back of this is a bronze Flora or Melpomene with inscription giving the date of the inauguration of the Park, Sept. 17, 1874. On the other side of the boulder is inscribed Huelén, the ancient Indian name for the hill, signifying misfortune or sorrow, a curious name for so superb a feature of the landscape. A little farther are two bronze lions, copies of the famous ones at Florence. Beyond the next corner of the winding road is the foundation stone of an old Spanish bridge formerly stretching to the inscribed boulder. Built in 1787 it was destroyed in 1888. Halfway up the hill is a small door in a perpendicular rock wall, the entrance to the Seismological Observatory, where record is made of the numerous 'quakes, and of the observations conducted by M. le Conde de Montessus Ballores. A little higher the carriage road ends on a wide terrace in front of a spacious restaurant, well patronized for dining, especially during the summer, when an orchestra discourses sweet music. At the left of the road is a slab commemorating the removal of the bones of the heretics once buried here. The inscription reads: "In memory of those exiled from Heaven and Earth who in this place lay buried for half a century, 1820-1872."

Beyond one must proceed on foot. On attaining the summit, having viewed with admiration the lovely prospect, one may notice close at hand, a little below, a castellated gateway, above which is an ancient Spanish escutcheon here found buried. From the gateway a narrow flight of steps leads to



PALACE OF FINE ARTS



ENTRANCE TO PARQUE, SANTA LUCIA

a small chapel where Benj. Mackenna is interred and where services are held on the anniversary of his death. Looking over the parapet one may see below the remnants of an old gateway surmounted by two small Spanish guns. A little farther down is a monument to the first archbishop of Santiago. The statue of Pedro de Valdivia, on the spot where he built his fort, deserves especial heed. The inscription reads: "The valiant Captain of Estremadura, first Governor of Chile, who in this very spot encamped his band of 150 conquerors, Dec. 13, 1540. Giving to these rocks the name of Santa Lucia and forming of them a bastion he planned and founded the city of Santiago, Feb. 12, 1541." To see all the points of beauty and interest one must ramble on foot by the pretty paths leading in every direction to charming nooks or delightful outlooks. At noon a cannon at the summit of the hill is daily discharged by electricity from the Observatory in the Quinta Normal on the other side of the city. A second and less picturesque entrance to the Park, affording a more gradual ascent is well enough to leave by, but is not a suitable introduction to this genuine fairy land.

Very different, and more like any other, is the *Parque Cousiño* several miles distant. To see this at its best, one should go in carriage or auto together with the fashionables, between the hours of 5 and 7.30 p. m., when, particularly in the months September to December inclusive, it is thronged with fine horses and carriages, bearing the beauty and fashion of Santiago. Woods, pleasant walks, well kept gardens, beautiful shrubs, weeping willows drooping over a pretty lake, adorn the park; a good restaurant provides *almuerzo*, afternoon tea, and dinner, the latter at four *pesos*, well patronized and usually accompanied by music. There are cheap cafés, merry-go-rounds, and stands for dancing, where on Sunday may be seen the peculiar national dance of the Indians, *La Cueca*, where the couples face each other, handkerchief in hand, and dance with swaying gestures. In summer a biograph is usually in operation and twice a week a military band plays from 9 to 11 p. m., when the park is often crowded. Near the entrance is a large open grass plot with a pavilion in the center, where a Military Review takes place Sept. 19. Bicycle races and football games are sports of the youthful

Chilians, who take more kindly to athletics than the young men of some other countries. A lawn tennis club also is found here. The electric cars numbered 19 come to the restaurant in the park, number 18 to the gate only.

This Park was presented to the city by the famous Señora Isadora Cousiño, who was the richest woman in Chile before her marriage to the richest man in the country. He, dying, left all his property to her, as it was said that she had administered her estate better than he had his. The Señora, now deceased, being worth many millions in mines, railroads, steamships, cattle, and real estate, was a woman of so lavish expenditures as to cause much gossip even in Europe. Her residence in Santiago, of the Ionic order of architecture, is one of the finest in South America. It was decorated by the French artists who adorned the Paris Opera House. Her magnificent palace at Loti, unfortunately incomplete, would undoubtedly surpass anything at Newport. Outside Santiago she had an immense hacienda extending to the mountains.

Another large park of different character, at the west of the town, reached by Car No. 2 from the Plaza de Armas, is called the *Quinta Normal*: a particularly desirable place for a drive, as the buildings here are at a considerable distance apart. The fine trees in this section, the green fields of the Agricultural College, and the Botanical Garden are a pleasure to see. Some persons may be interested, after driving about, to visit the *Agricultural College*, the *Astronomical Observatory*, the *Meteorological Station*, and the *Riding School*. The College established in 1845 by President Bulnes has been of much benefit. A cattle show is held here annually. The *Botanical Garden*, though not large, deserves a visit. It has some fine specimens of the *Victoria Regia* and other aquatic plants, with a nice old German in charge. Apart from this garden is a nursery where flowers, shrubs, and plants of great variety are grown for the stocking of public gardens and parks. The *Zoological Garden* in this quarter does not amount to much beyond presenting many natives of Chile; condors, eagles, vultures, with others, in an aviary of Chilean birds; and domestic animals including some fine fowls. There are a few bears and monkeys.

The *Natural History Museum*, also in this Quinta (north side), contains a very complete collection of Chilean birds, fishes, insects, and plants, made chiefly by a celebrated German naturalist, Dr. Otto Philippi. Another section of greater interest to many, contains Indian mummies, specimens of pottery, weapons, and relics of colonial days. In 1911 the Museum was open Sundays and Thursdays from 10 a. m. to 5 p. m., but was expected later to be open daily. A good restaurant pleasantly situated and well patronized is opposite the calle Catedral not far from the Museum. An entire day is not too much to devote to seeing the Quinta by persons with taste for these matters, in which case the restaurant would be serviceable. The *School of Arts and Trades* for the training of mechanics and tradesmen is located on the south side of the Quinta not far from the Central Station.

Beyond the Parque Cousiño is the *Club Hípico* or race course on the outskirts of the city, with fine views of the Coast Cordilleras and the Andes. Sunday afternoons and feast days races are held beginning at 1.30, but most persons do not arrive until four. From August to the end of December the whole city, meaning of course Society, is said weekly to assemble there. In the Diez y ocho week, from the 17th to the 20th of September, it is difficult to get near the Pavilion. There is a special enclosure for members, and behind the Pavilion are little gardens where people go to take tea and meet their friends. Tickets, three *pesos* to the pavilion, five more to enter the paddock, may be bought after 7 p. m. Saturdays at the Cigarria La France, *Portal Fernández Concha*, 18; in the Centro Hípico, *Pasaje Balmaceda*, an arcade running from Huérfanos to the Plaza; or at the entrance of the enclosure. Races on Saturday, frequented more by sporting men than by Society, are at the *Hipódromo* on the north side of the river.

Along the bank of the Mapocho is another park, long and narrow, called the *Forestal*, which with the embankment and bridges forms a very pretty section of the city. At one end, in the Plaza Italia or Colon, is a monument presented to the city by the Italian colonists as a centenary gift, and on the opposite side of the beautiful *Palace of Arts*, in the Plaza France, is one similarly presented by the French colony. The

Palacio de Bellas Artes has a great Statuary Hall with some fine copies and the best original work of native Chilians. Nine spacious rooms contain a collection of paintings, including some originals of old masters and many by modern Chilean artists. The arrangement of the building is excellent and the whole is a great credit to the city. A smaller park is the *Plaza de Montt-Varas* in the calle Compañía between Bandera and Morande, on one side of which is the fine new *Palace of Justice* occupying a whole block. In the park is a statue of a scholar, a native of Venezuela, Don Andres Bello, a seated figure by Don Nicenor Plaza. Bello, 1789-1865, was so highly regarded by the Chilians that they declared him by works and public services to be a true Chilean, and by a special law of Congress declared him a citizen. Another statue is of two friends from college days, Don Manuel Montt, ten years President of Chile, and Don Antonio Varas, who worked together to promote the welfare of the country.

Housed in the old Congress Hall on Catedral street is the *National Library* which, with many books, contains a valuable collection of historical documents, some of these, spoils brought from Lima, and others, their own colonial archives: a place of much interest to the scholar and antiquarian.

The *Market*, seldom a show place in cities of the United States, everywhere in South America is an object of interest. Here it was one of the benefactions of Benj. Mackenna. Best seen early Sunday morning, it may be reached by following the 21st of May street from the northeast corner of the Plaza. Besides the usual and *unusual* profusion of fruits, vegetables, flowers, etc., may here be found tiny baskets made by nuns, and little jugs of earthenware and *mates*, some extremely minute. Another market on the north side of the river is especially for vegetables.

A visit to the *Municipal Theater* or Opera House should not be omitted. Erected as long ago as 1873, it probably surpasses anything of the kind in the United States, certainly presenting a finer exterior. An imposing entrance hall has wide staircases leading to the upper row of boxes. The Presidential box is large and elegantly furnished with reception rooms, etc., at the back, and a box for his lady guests below. There is a large foyer and refreshment rooms, and

there are seats for an audience of 4000. The opera season, though short, is brilliant, with a company every year brought from Italy for a month or more. Society is present in full force in immaculate evening dress, gorgeous gowns, and sparkling jewels, a spectacle of beauty, it is said, equaling that in any opera house of the world.

Santiago has many beautiful homes and pleasing residences, though less in the pure Spanish style than in Peru: fewer wide doorways admitting horsemen, and apparently smaller patios, of which one has but a rare glimpse. Among noticeably fine residences are the *Cousiño* on Diez y ocho, the *Edwards* on Catedral, corner Morande, the *Umeneta*, Monjitas street; on the Alameda, the *Concha y Toro* between Brazil and San Miguel, the *Ramon Valdez* between 18 and Castro, and the *Quinta Meiggs* between Republica and España, this having fifty or more rooms with elaborate furnishings.

An excursion which may be made by carriage, or by a good walker on foot, is to the top of Cerro *San Christóbal*, 900 feet above the city. A more superb view than from Santa Lucia is here afforded. At this point of vantage is an *Observatory*, a branch of the noted Lick Observatory of California. It is in charge of an American, Dr. Moore, and was established by the late D. O. Mills. Lower down on a prominent bluff is a colossal *Image of the Virgin* with arms outstretched towards the city as if in blessing. The pedestal contains a small chapel in which services are held December 8, the anniversary of her festival. On this night the statue, which with its pedestal is 70 feet high, is illuminated so as to be visible to the whole city. It is said to have been erected by women as a token of gratitude for their preservation from the earthquake, and also to celebrate the jubilee of the declaration of the Immaculate Conception.

The most important feature of the city to be visited, aside from Santa Lucia, is,—the *Cemetery*. Let no one be surprised and say that he does not care to visit such places. There are other cathedrals, plazas, public buildings, etc., but this again is unique and in many respects the most beautiful resting place for the dead that I have seen in any land; especially in November, the month of roses. A French lady resident, who did not find much else to please her, was most enthusiastic

over this. It may be reached by Car No. 8 from the Plaza de Armas. In front of the cemetery is a semi-circular plaza with a colonnade. The gateway is surmounted by a lofty dome, which bears a fine colossal group of statuary, Adam and Eve mourning the death of Abel. The whole effect is imposing. In the corridors of the entrance may be noticed the painted ceilings, and passing within one will observe a stately chapel where masses are said for the repose of the dear departed. Here in truth is a city of the dead, with streets laid out at right angles, many of these lined with beautiful houses, rows and rows of chapel-like tombs. In other places are statues, columns, and memorials in various forms. Some of the avenues are shaded by orange trees, magnolias, and the Jacarandá or Brazilian rosewood; others have the tall, stately, and more gloomy cypress; but when the roses blossom there is such a wealth of these that there is no gloom anywhere. They are of various kinds and colors, but most numerous, genuine large white roses which grow in great vines sometimes on trees to a height of thirty feet, or over the tombs, forming the most lovely framework imaginable. At the festival of All Saints, November 1, the sight is unequaled in any part of the world, as here this is at the height of the rose season, when there is also a profusion of other flowers. The immense masses of bouquets and floral devices of all kinds then placed upon the tombs and graves, even the poorest on account of the small cost of flowers being able to contribute, make of the already delightful spot a veritable floral bower. Among noticeable monuments are a bronze bust, near the entrance, on a black marble column, to the litterateur, Andres Bello; in the calle Central in the rear of the chapel is the white marble tomb of General Bernardo O'Higgins. Fifty yards to the right and then turning to the left, one finds the memorial erected over the remains of more than 2000 victims of the holocaust in the Jesuit Church, the Compañia, Dec. 8, 1863, when a gorgeous fête to the Virgin was in progress. The decorations of paper flowers and festoons of gauze which were interspersed with lighted candles, taking fire, fell among the crowd, chiefly women of the higher classes who thronged the church. The doors opening inward, the crowds, packed against them, made egress impossible, and nearly 3000 are said to have perished.



PALACIO DE LA MONEDA



CEMETERY IN ROSE TIME

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Few of the leading families escaped bereavement and since that time this festival has been solemnized with mourning.

The tombs of many of the Presidents are found on a street of that name, and on the Magnolia are many of real beauty belonging to some of the leading families. In the high wall of the enclosure which covers many acres are niches for the reception of the coffins of the poorer people. At the left of the General Cemetery as one faces the entrance from without is that where the *Protestants* are buried, naturally much smaller and far less attractive.

On the way to the Cemetery one may pass on the Avendia Recoleta the *Church of the Recoleta Dominica* which deserves a call. The façade presents a fine row of marble columns, the only edifice in the city furnished with such decoration. The doors are of carved wood. The interior is severely beautiful, avoiding the tawdriness exhibited in many Catholic churches. There are double rows of handsome marble columns with Corinthian capitals, a white marble chancel screen of trellis work, and above the high altar a marble Madonna del Rosario. The marble, imported from Italy, was brought in ox-carts from the coast. Pretty cloisters are adjoining.

In the same avenue a little nearer the city, at the foot of Cerro Blanco, is a small church rather dilapidated, La Viñita; of historical interest as erected by Ines Juárez, who came with Pedro de Valdivia, a woman of extraordinary courage both for enduring the hard life, and even going into battle; if necessary engaging in combat, when not attending to the wounded of both parties.

Santiago is an extremely religious place, so far at least as the women are concerned, the gentlemen often being inclined to agnosticism. Among the many churches the most important may be mentioned. *La Merced* at the corner of Merced and Claras is painted a pale pink and has two towers. At the main entrance on Claras, on each side of the carved wooden doors are two life-size paintings, on the right, of Ramón Monato, on the left, of San Pedro Nolasco who founded the Order Mercedarios. Within, the objects of interest are a wooden crucifix with notably expressive eyes, a gift from Philip II of Spain to the Order in Chile, an antique frame of solid silver near the High Altar enclosing a statue of the

Virgin, and an old pulpit of native workmanship carved from a single tree trunk. The four Evangelists are represented and at the base the four Symbols. The church has an excellent organ and is famed for its fine music.

The *Santo Domingo*, one of the oldest churches in Santiago, at the corner of Santo Domingo and the 21 de Mayo, has a beautiful silver altar exhibited on especial occasions only. The little plaza in front is gay with a small flower market, and nearly opposite on Santo Domingo is an old Spanish gateway.

The *San Pedro* is a pretty little church in Claras near by.

The large church of *San Agustín*, fronting on the Estado has a ceiling covered with pictures of Saints, Prophets, Martyrs, and also the Ten Commandments. A valued relic is a crucifix, concerning which it is related that in the total destruction of the church by an earthquake in 1730 this suffered no injury except that the crown of thorns fell from the head to the neck, and that whenever an attempt was made to replace the crown shocks occurred in the vicinity; it therefore remains where it fell. On the anniversary, May 13, occurs a great procession of monks and acolytes of various Orders, chanting, swinging incense; and with lighted candles, bearing beautifully embroidered banners, a robed figure of the Virgin, and the Crucifix.

El Salvador, church of the Jesuits, erected after the destruction of the Compañía in 1863, is on the Huérfanos and Almirante Barroso, passed by Car 21. This church was damaged by the earthquake of 1906, though Santiago was far less affected than Valparaiso. The interior is gay with colors, each pillar being composed of small columns of various hues, which are covered with designs in red, blue, and gold. An angel at the foot of each column holds a plaque with emblems of the Passion. Handsome stained glass windows portray scenes from the life of Christ.

The *San Francisco* in the Alameda, almost opposite calle San Antonio, said to have been built by Valdivia, is plain with a flat ceiling and one simple arch. All around are memorial tablets: on the left of the chancel is a fine marble Crucifix in relief. Of great interest as a historical relic, over the High Altar is the wooden image of the Virgin in velvet robes em-

broidered with gold, which Valdivia used to carry in his saddle-bags. Presented to the church by the brave Captain, it is highly valued. On the right of the altar is a small chapel to St. Anthony, on the extreme left, one to Our Lady, with altar of colored marbles and two angels above.

The *University of Chile* may be visited by those interested in educational matters. It has several departments, the main building on the Alameda, occupying the block between San Diego and Arturo Prat. Here are the general offices, the University Library and the Department of Physical and Natural Sciences termed the Engineering School. A hall in the form of a theater is in the part of the building which separates the two patios. A new Engineering building in the suburbs was to receive this Department, then to be replaced by the Law School, the largest of the various branches. In the Quinta Normal is the building of the Medical School with handsome classical façade, containing large halls, and patios ornamented with shrubs and flowers. There is a modern building for the Dental School and an annex for Pharmacy. It is interesting to note that in most of the South American countries coeducation is rigorously avoided in the lower schools while permitted in most of the universities, conditions exactly opposite to those in some parts of the United States. A good number of women in Chile study medicine, dentistry, pharmacy, etc., with the men.

The *Military School* on the Avenue Blanco Encalada facing the Diez y ocho now occupies a fine large building after a checkered career. Founded March 16, 1817, by the Supreme Director Bernardo O'Higgins, it is the oldest in South America, though it has experienced several interruptions. The present edifice was decreed in 1887 by the progressive but unfortunate President Balmaceda, though not until 1903 did it become established as now existing. The school has as its head a German officer, Col. Alfred Schoenmeyer, and provides courses of instruction similar to those in the German institutions. The building contains all suitable conditions of convenience and hygiene, a covered riding school, shooting galleries, patio facilities for gymnastics, laboratories of science and of military models.

The *Military Museum*, in 1911 housed in the *Arsenales de*

Guerra next to the Military School, by 1913 will probably be removed to a new building erected for it in the Quinta Normal. It contains many historical relics: the armor worn by Valdivia during the conquest, a chair which he occasionally used in the brief intervals from fighting, cannon brought over the Andes by Gen. San Martin to aid in freeing the country of Spanish dominion; a marble urn enclosing the hearts of four heroes who fell in the battle of Concepción in the effort to save the Chilian colors from the hands of their Peruvian opponents; the flag of the Esmeralda, commanded by Arturo Prat, and sunk in the battle of Iquique May 21, 1879; a marble bust of Manuel Rodriguez who, in the War of Independence, among other brave deeds as scout and spy, three times crossed the Andes on foot; other objects of interest, besides cannon, flags, arms, and trophies won in many a fierce battle.

CHAPTER XX

SANTIAGO TO BUENOS AIRES BY SEA

Southern Chile and the Straits of Magellan. The great majority of tourists will proceed from Santiago by rail over mountains and plains to Buenos Aires, being influenced thereto by several considerations. Of these the strongest may be the fact that the journey thus made occupies only 48 hours (the return 38), while by sea it requires twelve days, an important consideration in a brief tour. Also in view of the several weeks already spent on the ocean and the several more to come, all but the real lover of steamboat travel will prefer the land for a change, especially with the prospect of the fine mountain scenery always visible on the Trans-Andine journey and the possibility of a glimpse of mighty Aconcagua, which still claims pre-eminence as the culminating point of the Western Hemisphere.

On the other hand the route across the Andes, formerly blocked to general traffic for half the year by reason of the winter snows, may yet be impassable for a week or two, even longer, by reason of the great avalanches which on the Chilean side of the tunnel are liable in winter or spring to obstruct the track. When such a condition prevails, the longer way around may (rarely) become the shorter in time. A few will at any period prefer the Magellan route from inability to endure the 10,000 feet altitude of the mountain journey, from affection for the sea, or from an especial desire to traverse the famous Straits, discovered by Magellan in 1520 on the first around-the-world voyage, and to pass the southern continental limit of the main land if not the dreaded Cape Horn.

The leisurely tourist who desires to see everything of importance may enjoy the chief pleasures of both routes: going by rail to Puente del Inca on the east side of the mountain, or better, on to Mendoza on the edge of the great Argentine

plain, returning to Chile by the old route, the splendid horse-back and former diligence trail from Las Cuevas over the once frequented pass. Thus he may delight in near and distant views of splendid cliffs and mountains, and pause to contemplate among the everlasting hills the impressive image of a colossal Christ standing on the frontier of two great countries, an emblem of the eternal peace and friendship to which these nations have sworn.

The tourist who always prefers to travel by sea may at Valparaíso take a P. S. N. steamer (they sail once in two weeks) for Montevideo, where he must change for the short run to Buenos Aires. All of these boats call on the way at Coronel (or Lota) and Punta Arenas, every other one also at Port Stanley, Falkland Islands, the voyage occupying 11 or 12 days to Montevideo. A boat of the Kosmos Line may be taken, although they no longer as formerly go through Smyth Channel, all now missing the fine scenery of the *fjords*. Persons desiring to see more of Chile may go by rail down the famed Central Valley, the wonderful fruit and agricultural section, and through the beautiful lake region, taking the steamer at Coronel. A peculiarity of this longitudinal valley extending several hundred miles between two ranges of mountains parallel to the sea is that instead of being watered by a single stream running lengthwise, it is crossed by a number of rivers flowing west into the ocean. The railroad is now opened to the south for a distance of 400 miles to Puerto Montt on the Gulf of Ancud. Although sleeping cars are provided, the journey should be made by day for the enjoyment of the scenery.

For a considerable distance south of Santiago towns and villages are numerous, some of them especially frequented in the summer. Almost all kinds of fruits, vegetables, and cereals are raised to perfection in various parts of the valley. In the earlier part of the journey there are views of lofty Andean peaks; farther south the range is lower, but with a multitude of lakes and dense virgin forests, the scenery is no less beautiful. From *Talca*, a prosperous town of 45,000 on the Maule River, 50 miles south of Santiago, a branch line runs to the small but pleasant town of *Constitución*. It was in *Talca*, which was founded in 1692 and partly destroyed by

a terrible earthquake in 1835, that Director O'Higgins signed the Declaration of Independence. The city has a pretty plaza with a fine Government House, theater, church, and other handsome edifices.

Chillan, 100 miles farther, is a modern city famous for its fine horses and cattle. It affords an unusual opportunity to see the country people, who come in to the market-place on the outskirts of the city, two or three times a week, especially Saturdays. Wares are well displayed in booths, gay with *mantas*, gorgeous ribbons and lace, equestrian outfits, pottery, baskets, and horn ornaments. Street cars run to the historic ruins of old Chillan, the birthplace of Don Bernardo O'Higgins. The famous baths and hot springs of Chillan are beautifully situated among the mountains about 60 miles distant at an altitude of nearly 8000 feet.

The railroad crosses many rivers on some fine bridges, one nearly $\frac{1}{4}$ of a mile long and 300 feet above the Malleco River at Collipulli. A bridge $\frac{3}{4}$ of a mile long crosses the *Bio-Bio*, along the boundary line between the Spanish American settlements and the country of the fierce Araucanians. From Rosendo a branch line leads to the cities near the sea, *Concepción*, and its seaport *Talcahuano* 240 miles from Valparaiso, a port both of commercial and military importance on a large bay in which a dry dock has been arranged for the repair and the cleaning of naval vessels. Concepción, which was founded by Valdivia, but has been several times destroyed both by Araucanians and by earthquakes, is now a substantial modern city of 50,000 inhabitants, the third in size in the Republic.

Coronel and **Lota**, five miles apart on the Bay of Arauco, 40 miles south of Talcahuano, are, one or the other, regular ports of call for all the steamships, and the only one below Valparaiso for the P. S. N. boats before Punta Arenas. Hence one going by rail to Puerto Montt would be obliged to return to this point for his steamer; unless possibly the Kosmos boats call farther down. The boats call at Coronel or Lota to procure a supply of coal. This is pre-eminently the coal region of Chile, of which Lota is the center. In 1852 a property was purchased here by Don Matias Cousiño who explored for coal with success. His son Luis, in 1862 in-

heriting the property, in 1869 formed a company, keeping most of the shares. His widow later becoming sole owner of the company was called the richest woman in the world, with a property of at least \$70,000,000. She died in 1898 leaving six children. Hers was the greatest financial enterprise then carried on by a Chilean. The capital of the Company is now \$20,000,000. Half a million tons of coal are annually produced, $\frac{1}{10}$ of which is used by the Company for smelters and their own steamships, the rest being sold.

To visit the mines there is a drop in an electric car of nearly $\frac{1}{4}$ of a mile. There are streets, shops, offices, restaurants, stalls for horses, black-smiths' shop, etc., down below; and the workings go far under the deep sea where ships are sailing above. There is good rock and no drip. The Company owns copper mines, smelting works, pottery and brick works, glass and bottle factories, etc., with a fleet of steamers and sailing vessels. Five thousand workmen are employed here, for whom houses are supplied, free schools, church, medical attendance, free coal, asylum for aged, etc.

The Señora spent money lavishly at home and in Paris, where she was well known. Lota Park was laid out by the most skillful landscape gardeners with artistic design and picturesque effects. Stately trees, flower beds, all plants of temperate climes here flourished in a state of the highest cultivation. On a bluff above the town, it has wonderful sylvan beauty; with grottoes, bridges, fountains, cascades, etc., marble and bronze monuments, deer and other animals in the woods, an aviary with birds; near the center of the park, a fine marble statue by the noted artist Caupolicán. A palace fit for royalty, not quite completed, it is falling to decay. Superb wainscoting, gold and white frescoping, exquisite parquetry, carved mantels and sideboards, priceless curios and paintings, treasures of all kinds were brought from Europe, many never unpacked. The Park at times is open by courtesy to strangers, a spectacle of great beauty, though perhaps of melancholy. The Company owning 200,000 acres of farming land has many sheep and cattle and has planted more than 10,000,000 trees.

Valdivia. Still farther south in a picturesque site on the Calle-Calle River is the town of Valdivia (pop. 12,000), the

fifth city founded by Pedro de Valdivia, in 1552. It was too far from his base for that period, and much slaughter followed in fierce battles with the natives. Near its port, Corral, at the mouth of the river 15 miles away, in 1820 occurred the victory of Lord Cochrane's fleet over the Spanish. For several years the railroad halted at Osorno a little farther on. Its recent extension to *Puerto Montt* on the north shore of the Gulf of Reloncavi, about 100 miles beyond, will greatly enhance the prosperity of a rich and beautiful section already sprinkled with thriving German colonists. One of the lakes near by, Llanquihue, with an area of nearly 300 square miles is served with steam navigation.

The boats of the P. S. N. Company running from Callao to Liverpool reach Lota or Coronel the day after leaving Valparaiso. Five days later they arrive at Punta Arenas; in five or six more at Montevideo.

Sailing towards the South Pole, the coldest region on earth, the winds naturally become more chill, especially if it is their winter season. By a natural perversity of fate, it is said that the finest scenery is usually passed at night, also it is often foggy or it snows, so little may be seen. After several days with no land in view, the sight of *Cape Pillar*, rising 1395 feet above the sea, the western extremity of Desolation Island, and on the south side, the western outpost of the Straits, gives a thrill of pleasure. On the northwest side of this entrance from the Pacific are the three Evangelists and the Sugar Loaf, columnar rock, more impressive than many mountains. From Cape Pillar to Cape Virgenes at the eastern entrance of the Straits it is 240 miles as the crow flies but between 300 and 400 by the channel which must be followed. As the prevailing winds are west, sailing ships between October and March sometimes go through from the Pacific, a fair passage occupying 80 days, but they more generally prefer the passing around Cape Horn, 100 miles south, where jagged boulders rise to a height of 1391 feet in the midst of a turbulent sea; for despite the 500 additional miles of open water it is open with less danger from fogs, cross currents, etc., and time is usually saved. Storms are frequent in this region, but if the weather favors, the fine scenery including glacier-covered mountains, deep bays, grim cliffs,

gray moss, and sparse vegetation, picturesque icebergs, the multitude of penguins, sea-gulls, an occasional albatross, seals and whales, the tints of sea and glaciers, of clouds and crags, forms a picture which some persons think is unequaled in Norway or Alaska.

Tourists sailing on a special cruise may have the pleasure of a detour to the south to obtain a finer view of the splendid mountain *Sarmiento*; not so high as many others, but with its 7330 feet of altitude in this latitude presenting an imposing spectacle, at the base dusky woods for one-eighth of the height, then 6000 feet of snow and glaciers, two of the latter indeed reaching down to the sea.

Punta Arenas. After sailing through Magdalena Channel southeast to Cape Froward, the most southern point of the continental mainland, the ship turns almost north, a trifle to the east, and in a few hours comes to anchor in Lat. 53° off Punta Arenas, the most southern city in the world, 900 miles nearer the South Pole than Christ Church, New Zealand, and 1600 nearer than Cape Town. From Cape Froward west, the British Pilot Book says the weather averages 11 hours daily of rain, hail, or snow. There is none worse in any inhabited part of the globe: but the region is not unhealthy. The city of about 12,000 people is a flourishing place with wide streets, good water works and electric lights, a handsome cathedral, appropriate public buildings, and many fine residences. A museum in charge of some Catholic priests has a collection of the fauna of the country, birds, snakes, fish, animals including a woolly horse, a unique specimen with wool a foot long. Also pottery, weapons, and utensils of the Fuegian tribes are exhibited. In the town, furs, fine guanaco skins, ostrich feathers, Indian baskets, etc., are for sale, and most persons buy souvenirs. A penal colony was first established by the Chilians in 1843 at Port Famine not far away, but after a revolt of the convicts the town was established here; when the place became a regular port as a coaling station for steamships the criminals were removed. It was soon discovered that sheep would thrive in this locality: many large ranches have been established in the back country, so that 16,000,000 pounds have been shipped in a year. The Indians, formerly numerous, are now almost



TIERRA DEL FUEGO



ENTRANCE TO ANDINE TUNNEL, CHILIAN SIDE

exterminated, though some Yahgans and Onas still wander in the wilds of *Tierra del Fuego*. As usual most of the white invaders of whatever nationality have united in their destruction, to which the diseases of the white man have also contributed.

A settlement still farther south on *Beagle Channel* in the Argentine dominion is a village inhabited only by criminals and their guards, few of the latter being needed, as escape is impossible except by sea. On this side of Cape Froward the ground is flatter, the air dryer, the country treeless and of small interest. Nine hours from Punta Arenas the lighthouse on *Cape Virgenes*, 135 feet high, is passed and a three days' sail on the Atlantic in a direct voyage brings one to Montevideo.

Port Stanley on the Falkland Islands, a genuine English town of 2000 people, has a fine harbor with supplies for ships and facilities for repairs; no trees, but a sedgy grass, called tussac, 7 feet high, excellent for horses and cattle, and with roots something like celery, edible for man. The weather is never very cold but the average temperature is low.

CHAPTER XXI

ACROSS THE ANDES TO MENDOZA

THE journey from Santiago to Buenos Aires by the passage of the Cordillera, in former days seldom undertaken between May and October save by the hardy mail-carriers, may, since the opening of the railroad in 1910, generally be accomplished in any month of the year. Sometimes, however, traffic is temporarily suspended on account of snow-slides blocking the track on the Chilian side of the tunnel. Such inconvenience, oftener arising in the southern winter or early spring, will doubtless in time be obviated by the building of snow-sheds along the dangerous sections, as has been done in the United States. At present, from July to December, it may be well to inquire about conditions before purchasing a ticket, though prolonged suspension of traffic is exceptional.

The excursion across the Andes, less fatiguing than formerly, is also far less exciting. The comfortable safety of a car ride through the tunnel is tame indeed in comparison with the passage by coach or muleback over the *cumbre* 2000 feet above. Yet as prosaic comfort is ever more popular than unusual and adventurous experience, tourists to-day by thousands and tens of thousands make the journey where formerly passed tens and hundreds. Still, even to the gazer from a car window the excursion is memorable; to the lover of sublime grandeur the day affords a rare joy. Very different is this ride from those across the mountains farther north. Until the completion of the line from Chimbote up the Huailas Valley, the Oroya railroad alone will bear comparison with this. Nor need comparison be made. Each is truly an *elevating* experience and wholly unlike the other.

An afternoon departure from Santiago is customary, often as late as 6.15 p. m. The night must be spent at Los Andes whence the start is made in the early morning. With ample

time at one's disposal, it is well to take a forenoon train from Santiago to have a few hours at the pleasant Chilian summer resort which affords opportunities for many delightful strolls, while the scenery along the way makes a daylight journey desirable. The monument to the Clark Brothers unveiled at Los Andes, October 22, 1911, is a worthy honor to the initiators of this great railway. As early as 1870 they applied for a concession, though it was 1886 before the first was received; while they were unable to complete the work, they have the credit of its beginning. After the *Casa Grace* took charge on the Chilian side good progress was made. In 1906 it was arranged to pierce the tunnel under one control, and the task was accomplished in time for the Argentine Centennial in 1910. As far as Llai-Llai, where connection is made with the train from Valparaiso, the route lies north along the valley over the road which has previously been traversed. At the junction, venders of delicious fruit are ever on hand selling, according to the season, pears, peaches, oranges, grapes, cherries, or figs, at prices calculated to tempt the hungry tourist. Llai-Llai is a pleasant little town of about 6000 people, at a height of 2625 feet above the sea. San Felipe, somewhat larger, is passed before reaching (to use the full name), *Santa Rosa de los Andes*.

A few rods from the station is the hotel where the night is passed. The town boasts of another, but through travelers prefer the pleasant little establishment, often over-crowded, from the rear of which the train early in the morning departs. In the summer the climate of Los Andes is delightful, the evenings always cool; at other seasons the nights are cold and frosty. Leave word in the office when you wish to be called, or you may be overlooked and miss your train or your coffee, which is not agreeable. The cars are apt to be full, so it is well to hasten, if friends wish seats together, or at times to obtain any at all.

The track follows the Aconcagua River, on which Los Andes is situated, up a beautiful valley, after 8 or 10 miles growing narrower between steeper walls. From luxuriant vegetation to bare rocks and snow, from beauty to grandeur, the change is quickly made. The river becomes rapidly smaller as we pass above the merry little streams which con-

tribute to its madly rushing torrent. One bridge is called the *Puente de las Viscachas*, these being rabbit-like animals resembling the chinchilla but with coarser fur. The rocks of varying hue in sunlight and shadow, cliffs and gorges, and the foaming stream continually attract the eye. A hundred yards beyond the station, Los Loros, is the place called *Salto del Soldado*, the Soldier's Leap, to see which one must keep a sharp lookout on the left, the train passing on a shelf with the stream 60 feet below. Various tales are told of the origin of the name, one that in the War of Independence a patriot escaped from the enemy by leaping the narrow gorge which is crossed by the train on a bridge. At the station, Rio Blanco, White River, a stream of that name joins the Aconcagua. Not far beyond is Guardia Vieja, where for more than two centuries a sentry or watchman has been stationed for the protection of the traveler, a necessary though inadequate safe-guard, as in the old days bandits sometimes lay in wait even for parties of considerable size. Robberies were not infrequent and murders were by no means rare.

In ascending the Visp Valley to Zermatt by the aid of the rack and pinion system, also employed on the Andine, a height of 3000 feet is gained in a distance of 28 miles. On this road 7000 feet are climbed in 35 miles, 2000 of these in the last 8 to Juncal, a rapid ascent for a traffic as distinguished from a purely mountain railway. *Juncal* is noteworthy, as the place where formerly the night was spent by those tourists and business men designing in the early dawn to set out on saddle animal or in mountain wagon for the summit and the other side. Farther on is a tranquil little lake, above 9000 feet, an opalescent gem, at times turquoise or sapphire, called the Lago del Inca. Now the track makes a great curve into an immense *couloir*, passing at the foot or along the side of cliffs or steep slopes, where, as in places lower down, rocks small and large seem ready to fall, as others have already descended. From the farther side of the great curve we soon look across at the track 1000 feet beneath. We gaze in admiration upon the splendid gloomy cliffs with tints of slate color from blue-gray to black, and on rocks with delicate hues of pink and cream, splashed with red and bronze or green; intermingled with these are

patches of pure white snow. Observation cars would greatly increase the pleasure. Too soon at Caracoles, at a height of 10,486 feet, the tunnel's portal is reached and the splendor of the majestic scene has vanished. Now for almost two miles, to be exact, 10,385 feet, the train goes on through the backbone of the continent at an elevation about the same as the tunnel's length. Near the center, the international boundary is passed; hence, after ten minutes of darkness, coming once more to daylight, one is in the great country of Argentina on the east side of the Andes, still in a vast wilderness of gorges, rocks, and peaks of multifarious shapes and colors, diversified by immense fields of snow, with many brief visions of grandeur which one would fain tarry to enjoy. Fortunate the traveler, who, 7 or 8 miles below Las Cuevas, has at the head of a side valley at the north a glimpse of colossal *Aconcagua* 15 miles away, a long ridge of snow arching into two domes, with a sheer drop of 10,000 feet on its black southern wall; and farther on a sight of *Tupungato*, 30 miles away at the south: both mountains first climbed in 1897 by the Fitzgerald Expedition, though he unfortunately was compelled by mountain sickness to forego the satisfaction of attaining either summit himself. The first to reach the supposed apex of the Western Hemisphere, the top of *Aconcagua*, according to the latest measurement, 22,817 feet, was Matias Zurbriggen, the celebrated Swiss guide, who in almost every land has led English and Americans to the summits of noted mountains. Alone, January 14, 1897, he gained this height, and there erected a stone man as is the custom where possible. In April of the same year, the first ascent of *Tupungato*, 21,451 feet, was made, also by Zurbriggen, and the Englishman, Vines.

Puerta del Inca. The first station in Argentina is *Las Cuevas*: then we drop quickly to *Puerta del Inca* where a few moments are allowed for tea. The contrast between the green and luxuriant vegetation of the Chilian side and the barrenness of the Argentine is singularly opposite to that in Peru, where the western slopes of the Andes are mostly desert while the eastern are clothed with the richest verdure. At *Puerta del Inca* is a curious formation from which the place is named, a natural bridge of stratified rock, one of nature's marvels.

The stream has perforated a bank about 20 feet thick so as to form, 80 feet above the river, a fine arched bridge, at the top 150 feet long and 20 wide, and nearly 30 feet thick. The piers have been strengthened by calcareous deposits from springs which gush from the earth just at the bridge. On the left bank of the stream a path of steps partly cut in the rocks leads down to hot waters. First comes the Bath of Venus, an effective grotto of white stalactites. Next is the Champagne Spring, its foaming waters revealing a considerable pressure from below. Among other warm springs beyond is one called Mercury. On all sides gush forth these waters cold, hot, and tepid, saturated with carbonic acid gas; the Venus is 86°, the Champagne 93°, the same when the path is covered with six feet of snow. The waters are superior to the more noted Vichy in containing twice the quantity of carbonic acid, hence greater effervescence; and five times as much iron. This renders them a real treasure, a few months' treatment causing maladies to disappear (they say) upon which the Vichy waters make no impression. The iron, salts, and gas of the waters make them efficacious in gout, rheumatism, and severe stomach affections, as well as an excellent tonic for those who believe such to be required. Sulphur, good for skin diseases, is also present. The *Hotel del Inca* affords comfortable accommodations (including a billiard room); all that could be expected at an altitude of 8924 feet, for a daily fee of six *pesos* (\$2.64) with some extras.

One who is ambitious to ascend one of the lofty peaks near by, or who would merely stroll to a lesser height to gaze upon those above, or who would wander in strange valleys and on ragged slopes will here find the most favorable headquarters for his rambles, as well as cure for many ailments. While the great mountains, Aconcagua and Tupungato, no longer afford opportunity for a *first* ascent, there are many other peaks of various altitudes, the summits of which are yet untrodden; one, lofty Mercedario, about 22,000 feet, to the north of Aconcagua, believed by some to be second in height to that alone. Expert climbers only should attempt exploits of such magnitude, and these not without Alpine equipment and more; for to the ordinary paraphernalia of proper shoes, ropes, and ice axes must be added tents, sleep-

ing bags, etc. The season for climbing here is not the same as in Peru and Bolivia, but during the summer of this region, December and January. Strange to say, although in the Temperate Zone, so vastly farther from the equator, these mountains have infinitely less snow upon their slopes than have Huascarán and Illampu. They are therefore much easier to climb, making Swiss guides not an imperative necessity, so far as the technical difficulties are concerned: though whether reliable companions as porters could be secured upon the ground is an extremely doubtful matter.

But on this journey by rail how much has one missed! Discomfort indeed has been avoided; but at the cost of a glorious and exciting experience. In former days, what a rush and bustle at Juncal! in the chilly hour between three and four a. m., when an army of pleasure and of business travelers hurried to secure places in the mountain wagons, or to select a gentle and sturdy animal for the seven hours' ride. The coach drivers were reckless Jehus who madly raced for the summit and then for the lower goal, amid a caravan of freight wagons, baggage animals, and riders, the latter to their joy soon left behind. Though the roads were called good they were deep with sand, and have no such great curves as the roads over Alpine passes. Short zigzags with acute angles, a roadbed rough with ruts and stones, few walls at the corners where a slip over the edge would mean a roll of a few thousand feet, made a ride in a swaying coach behind horses going at a gallop assuredly exciting to people with any nerves. Some, once embarked and unable to escape, would turn their thoughts from danger to admiration of the scenery, reflecting perhaps that accidents were rare. The view of mighty walls, of glaciers near at hand, of distant glorious mountains; the fine pure air ever colder, though alas! ever thinner, was a blissful experience for those who could enjoy it; but not for the faint-hearted either literally or figuratively. Here and there one would grow faint, become unconscious, perhaps even pitch out of the wagon: oftener a stalwart man than a frail woman. On they would go, their friends uncertain whether a temporary weakness or a serious, possibly fatal affection was attacking the victim.

At last the *cumbre* or highest point was reached, 12,796

feet above the sea; not a sharp ridge, but a nearly level stretch a quarter of a mile across among the massive hills and mountains: a tremendous range of gloomy, desolate, forbidding peaks, or a splendid rampart of majestic, glorious mountains, according to the soul and mood of the spectator. Here in the midst of this great solitude is the most impressive monument, men say, in all the world, *the Christ of the Andes*, a bronze figure of Christ of heroic size, 26 feet, one hand outstretched in blessing, the other supporting a still higher cross. The circumstance of its erection, the sentiment involved, as well as the unique position of the monument, make it the most remarkable in the world's history.

Chile and Argentina in 1900 were on the verge of war over a boundary dispute involving 80,000 square miles of territory in the Patagonian country. Immense sums expended for warships and other preparations were the cause of abnormally high taxes, the products of which were needed rather for the development of physical resources and of education. The British Ministers employed their good offices and two bishops, one of each country, traveled among their towns and villages preaching the cause of Peace and Arbitration. Bishop Benavente in Buenos Aires, on Easter Sunday 1900, first suggested the erecting of a statue of Christ upon the boundary, to prevent if possible any recurrence of strife. A treaty was made, the controversy was submitted to the arbitration of the British Monarch; King Edward entrusted the case to jurists and geographers whose decision, dividing the disputed territory, was cheerfully accepted. In June 1903, Chile and Argentina, pleased with the outcome of this matter, made a general arbitration treaty, the first ever concluded among nations; a considerable disarmament followed releasing much money for needed internal improvements, and good feeling and confidence have replaced bitterness and jealousy.

In 1901 the women of Buenos Aires, on the initiative of Señora de Costa, President of the Christian Mothers' Association of that city, acting upon the suggestion of Bishop Benavente, undertook to secure funds for a statue. A young Argentine sculptor, Mateo Alonso, created the design; the statue was cast from old Argentine cannon. In May 1903, the Chilean representatives came by sea to Buenos Aires for

the ratification of the treaties, when the statue of Christ was inspected and Señora de Costa pleaded that it should be placed on the highest practicable point on the boundary of the two countries. In February, 1904, the final steps were taken. The statue was carried by rail to Mendoza, and on gun carriages up the mountain side, soldiers and sailors in dangerous spots taking the ropes from the mules. On the 13th of March, 1904, the dedication ceremonies took place in the presence of hundreds who from both sides had come up the night before and here encamped to witness this extraordinary spectacle. The Argentines stood on the soil of Chile, the Chilians on that of Argentina. The booming of guns, the sound of music re-echoed through the mountains. When all was ready, the monument unveiled, there was a moment of solemn silence, followed by the dedication of the statue to the whole world, as a lesson of peace and good will.

The monument consists of an octagonal granite column 22 feet high upon which is a hemisphere of granite with a partial sketch of the world's outlines. On this stands the bronze Christ 26 feet high, the cross extending five feet above. Two bronze tablets on the granite base, the gift of the Workingmen's and Workingwomen's Unions of Buenos Aires, bear inscriptions in Spanish, on one side statistics and dates, on the other—

"Sooner shall these mountains crumble into dust than Argentines and Chilians break the peace to which they have pledged themselves at the feet of Christ the Redeemer."

Until the opening of the railroad in May 1910, this great statue was annually passed by thousands who paused here for a moment in the midst of their dizzy ride to rest and to gaze upon the scene. Now it stands ever lonely between heaven and earth, the silence no more broken by the raucous shouts of swearing coachmen and muleteers, or by the crude jests of a boisterous throng; to the few who now venture along that solitary way, a solemn spectacle.

On this journey over the *cumbre* one is likely to descry specimens of the great condor, oftener to be seen in Chile than in the countries nearer the equator. In the many days I have spent above 15,000 feet in Peru and Bolivia, not one appeared within the range of my vision. In the mountainous

regions of Chile, the birds are so numerous as to be a pest, attacking pigs, sheep, children, and rarely a grown man; hence a reward for condors dead or alive has been offered by the Government. From the top of the pass down to Las Cuevas near the tunnel entrance it was said to be a swift slide at breakneck speed. The thankfulness with which the tourist descended from the coach to enter the prosaic train may well be imagined. The sturdy pedestrian was the one who in safety and tranquillity might truly enjoy the magnificent visions, while others in terror had fleeting glimpses of the splendid panorama. One should not, however, even with a good revolver, in these days venture alone upon the traverse, unless thoroughly seasoned to greater heights; for though the brigands who once haunted this region have probably departed to more frequented scenes, the danger of an attack of mountain sickness or of a sudden storm, especially towards the beginning of winter, should deter most persons from the excursion except with suitable companions and equipment. It should be noted that high winds frequently prevail in these lofty regions after nine or ten in the morning, strong enough at times to hurl horse and rider from the track to the depths below; this fact accounts for the unearthly hour at which the start was formerly made for the ride over the *cumbre*. Stone huts called *casachas*, anciently built as refuges from storm, are scattered along the road, though now apt to be snow-filled and useless.

Below Puente del Inca, the region seems like the interior of an extinct volcano, with variously tinted volcanic rocks. Dotting the slope of a jagged mountain, some odd small black pinnacles, called *penitentes*, are supposed to resemble toiling pilgrims, and the perpendicular cliffs above suggest a cathedral. On other slopes are *nieves penitentes*, ice pinnacles, curiously formed by the action of sun and wind, these the original *penitentes*, as the pilgrims were garbed in white.

Beyond *Punta de las Vacas* is a point on the left where the rock strata are of tints especially magnificent. At the station *Uspallata*, the narrow gorge opens into a little plain at right-angles, where river and railroad both turn south. The name *Uspallata* is applied to the whole pass: its passage by

a division of San Martin's army with cannon was a remarkable military exploit: the general himself with the larger force crossed to the north of Aconcagua a slightly lower but colder pass called Los Patos.

Cacheuta. Near this station, 40 kilometers from Mendoza, are more hot baths, on the left of the railroad descending, but on the right bank of the river. Here is a surface of about 3000 square meters where by digging to a depth of 2 or 3 feet hot water will gush forth, the temperature varying according to the location, the hottest water near the river, 112°, the lowest, 79°. The waters are valuable to sufferers from rheumatism, articular, muscular, and visceral; less so for neuralgic pains, which may return. Women are benefited in their special ails. The waters strongly stimulate the nervous system, the power of nutrition, and the whole organic system including the heart action and circulation, and are therefore forbidden to persons suffering from diseases of the heart and circulation, some of whom pay for their rashness with their lives. The bath establishment, affording fair accommodations, a dining-room seating 250, and a billiard room, receives about 20,000 guests a year. Summer visitors are the most numerous. The baths include a swimming pool, and smaller tanks with water hot or cold, and a grotto for Russian baths. The price for two meals daily and bath is six *pesos*, or second class 4.50. The two meals are *almuerzo* and dinner, morning coffee being extra, a curious custom first observed in Chile but obtaining largely in Argentina. The Indian name, *Cacheuta*, is derived from the fact that here an Indian chief bearing, with attendants, two skins full of gold was met by Spaniards as he was going to ransom the Inca. The Indians succeeded in deceiving the Spaniards and concealing the gold. The secret was well kept until a poor Indian, befriended by a missionary, revealed the hiding place; but there was a mistake somewhere as all search was vain.

At length the mountains are left behind, probably after dusk has fallen, so that the arrival at *Mendoza* is in the early evening. The tourist who is making a hasty trip will hurry across the station to the probably waiting train, by which he will arrive in Buenos Aires the following evening. The

more leisurely, and the tired traveler will take a carriage to the Grand Hotel where an excellent dinner will be enjoyed and comfortable night quarters may be obtained. In looking about the town and visiting one of the great *bodegas*, a day or two will be agreeably spent.

Mendoza Hotels, the *Grand*, the *Club*, the *Francia* and others. At the Grand, on Plaza San Martin, the table was unexpectedly good; the dinner, served on the broad veranda, from seven to nine on a balmy summer evening, was a genuine pleasure.

Mendoza, with 45,000 inhabitants, the largest city in West Argentina, has a remarkable record. Strange, indeed, that this town at the base of the loftiest of the Andes, by these separated from one ocean, and by 650 miles of pampa from the other, was founded nearly fifty years before the first settlement in the United States and twenty years before the city of Buenos Aires came permanently into being. If we knew or reflected more on the bold deeds of other days in other countries, we might, perchance, have more respect for others and less assurance of our own great superiority. May 2, 1561 (some say March 2, 1560), a city was founded by Pedro del Castillo in a fruitful spot watered by the Mendoza River. At an altitude of 2500 feet, in the longitude of Portland, Maine, and a latitude corresponding to that of Charleston, it is an agreeable place, with plazas, wide, pleasant streets, and attractive buildings; but all seems new. Two cities there are, the living and the dead; not as in Cuzco, the one of an earlier race, built over and around by invaders, but an old city of the sixteenth century, a new one of the nineteenth. Unless aware of this fact, the old will be ignored, the visitor passing on, unaware of its existence. Some, indeed, may prefer so to do, but others will desire to have a glimpse of the ruins: for the city of 1561, 300 years later, was utterly destroyed by a tremendous earthquake. The catastrophe was of a singular character. At 8.30 p. m., March 20, 1861, a subterranean groan was heard. On the instant, before there was time to flee, the house walls crumbling fell, the roofs in the middle, so that the people, generally in their houses, perished to the number of 10,000-15,000. Some, who were promenading in the streets or plaza, were killed or thrown

to the ground; but many of these who were saved engaged in the work of rescue: too few, however, to do effective labor, so that a large number who had not been killed outright, confined among the ruins, perished from asphyxiation and starvation. From lamps and fires in the dwellings and the breaking of gas pipes, a conflagration followed, rendering the night more horrible. Some districts next day were flooded from the obstruction of the canals; the odor of dead bodies became insupportable, as the survivors were too few to remove them. The shocks had continued until nothing was left standing; there were 19 within the next 24 hours, 17 of which were violent; 14 more the next day; gradually they diminished, coming to an end in May. It is extraordinary that the strength of this violent convulsion was confined to a district 60 miles long and 6 wide, extending southeast from the Uspallata Valley. A slight jar was felt at Buenos Aires, but in Chile across the Andes no tremor at all. Assistance, though promptly sent, was long delayed in arrival, as at that time practically no railroads existed in Argentina. Succor first came from the neighboring towns of San Juan and San Luis, then from Chile, all of Argentina, Paraguay, Uruguay, Peru, and Europe; by which the survivors were enabled to rehabilitate themselves.

There was the usual talk of changing the location of the city to a site not far away near granite hills, indicating a more solid substratum; but the people as elsewhere refused to move, rebuilding close by in the lighter Chilian fashion, with a larger use of wood, and employing much material taken from the ruins. Thus these have to some extent disappeared, but it is worth while to have the coachman drive you over, if you care to see the destruction wrought.

The *new* city of Mendoza has recently experienced a rapid growth and great prosperity. Of the seven plazas, most important are the San Martin on which is the Grand and another hotel, also the handsome building of the Bank of the Province; and the Plaza Independencia, larger and finer, around which are already erected or about to be built, a new Government Palace, a Legislative Building, and a Hall of Justice. Other objects of more or less interest according to one's taste, are churches, convents, libraries,

a national college, a kindergarten of the very latest model, a normal and an agricultural school, factories of various industries, several Clubs of foreigners here resident, hospitals, orphan asylums, and a fine penitentiary. There are many broad streets, the chief avenue for shopping and promenade, the San Martin, being 100 feet wide with four rows of fine poplars. The streets, clean and well paved, are lined with a profusion of trees, more than 10,000; so many as to render the atmosphere at times (it is said) stifling and unhealthy. The houses are mainly of one story and none are above two, out of consideration for the earthquakes.

A comical and original method of street watering may here be observed. Considerable streams run along the sides of the main avenue, if not elsewhere, and boys with buckets on the end of long poles dip these into the water and throw it upon the driveway, a primitive but effective method.

On the west of the city an immense park is being developed into a charming resort at the edge of the Andean foothills. The handsome bronze gates at the entrance, costing \$25,000, were imported from England. Within are splendid driveways lighted by electricity; beautiful flower beds; thousands of trees and shrubs; an interesting zoölogical garden; a pretty botanical garden; and a charming lake nearly a mile long and 330 feet wide, arranged with boating facilities, beautified by islands, and furnished with a splendid grand stand on a sloping shore with seating accommodations for 3000 people. Not far away is a *rond point*, with a kiosk as a band stand. Already a delightful resort which no one should fail to visit, it promises to be a truly magnificent pleasure ground. If there is one to compare with it in the United States in a city of twice the size, it has not come to my attention.

To many the greatest interest of Mendoza will be in the neighboring vineyards and *bodegas*. Many fortunes, large and small, have been made in viticulture in Argentina, and this region east of the Andean foothills is wonderfully well calculated for its development. Investments in this business return as high as 25 to 30 per cent profits. One hectare ($2\frac{1}{2}$ acres) of land will bear 300 to 400 cwt. of grapes, which sell at 3 or 4 *pesos* a cwt., an Argentine *peso* being 44 cents. An economical Italian family can live on the returns from a

single hectare. Among the various industries of the province wine production is the most important, increasing between 1895 and 1908 from the value of 9 to 44 million *pesos*. The largest of the *bodegas* or wineries is that of *Domingo Tomba*, whose wines have received at European Expositions many gold and silver medals. This great establishment at *Godoy Cruz*, a pretty town half an hour by rail from Mendoza or a pleasant drive, may be visited in a half day. Interesting at any time it is especially so during the grape season which lasts from February to May, the fruit coming in first from the north and along down to the southern limit of production. Señor Tomba owns several large vineyards, 3000 acres, and purchases the entire product of others. The *bodega*, established by his brother Antonio (now deceased) in 1886, then producing 1000 hectolitres, increased to a production of 254,000 in 1909. All essentials of a first class establishment are here found. The employees, like the proprietor, are mainly of Italian birth. It is an immense property with many buildings of various kinds. Rows of enormous casks for fermentation and deposit contain 220 hectolitres each, others are smaller, also there are great tanks of brick. The large two-wheeled carts for transportation are drawn by four horses, one ahead and three abreast, the driver riding one of the three. A large patio contains a pretty garden and a monument to the founder of the House. The buildings are as neat as possible and of fine workmanship. The wine is excellent, of good body, but not designed for export, not improving with age. For ordinary table use there is none better, and the demand for it in Argentina, in spite of continually enlarged production, is always greater than the supply.

Mendoza is a popular winter resort for many Argentinians on account of its picturesque surroundings and generally cloudless sky, with a superb view of snowclad heights; but most Americans would consider a frequent temperature in the forties a trifle chill without a fire, and would hie away to warmer climes.

The extensive system of irrigation carried on in the Province renders it highly productive of alfalfa, wheat, and corn, as well as grapes; also of vegetables rivaling the California

giants, onions as large as plates, colossal carrots and radishes, at some seasons, mushrooms, marvellous in size and flavor, all these largely transported to Buenos Aires. As an attractive center of immigration this is the third province of the Republic.

CHAPTER XXII

ARGENTINA—ACROSS THE PLAINS TO BUENOS AIRES

THE great country of Argentina, the largest we have yet visited, in South America second only to Brazil, has more than five times the area of France and above one-third that of the United States. Considerably longer than the latter country, though not so wide, its latitude compares with that from Key West to Hudson Bay, a distance of 2200 miles; its width varies from 200 to 1000 miles. Its great length from north to south assures wide variety in climate, aside from changes in elevation, of which there is not much after getting away from the Andes. The climate range is from Sicily or hotter to Iceland, less than in corresponding latitudes in North America.

The central part of the country now to be traversed is the great pampa section, largely a region of cattle raising, where the soil is from 3 to 6 feet thick; farther north and east in the Paraná basin, where wheat, sugar, and many other products are raised, the soil is from 30 to 100 feet thick. In Patagonia at the south the plains are of sand and gravel, requiring irrigation except for a few small fertile valleys. A rich country is Argentina, now forging ahead with wonderful strides.

The journey to Buenos Aires is made from Mendoza in twenty-four hours by the express trains, chiefly composed of sleeping cars. These have by the windows at one side an aisle, from which staterooms open with berths one above another running cross-wise of the car. Each room contains a lavatory, electric lights and fan. By day there is a long leather covered seat, less comfortable than those in our sleepers, and far less than on the despised narrow gauge railway from Oruro to Antofagasta. A dining car is attached to the train, furnishing fair meals at reasonable prices.

Leaving Mendoza by daylight, a region of vineyards with a few towns may be seen for some miles, and at harvest time men and women by thousands engaged in picking the great clusters of grapes; but soon an arid country is reached, not like the West Coast deserts farther north, but resembling our western plains. There is a scanty growth of scrub and an excessive amount of dust, which in great profusion creeps through the single windows to the discomfort of all passengers. Here there is almost no rainfall, and one need not regret passing in the night. *Santa Rosa*, a town fifty miles from Mendoza, has some historic importance as the site of two battles in the civil wars of 1874, where the national forces, defeated in October, were in December victorious under Col. Julio A. Roca.

Near the small station *Balde*, 75 miles farther, is a noted artesian well 2000 feet deep, sunk in this arid region by the National Government at a cost of 150,000 *pesos*. Boring was begun March 31, 1884, with a tube of 20 inches diameter, decreasing gradually to 3½ inches. Not until October 12, 1887, did water begin to gush, at last in great quantity, estimated by some at 8000 liters, by others at 200,000 liters an hour, a rather wide margin. The water having a temperature of 105° is drinkable and of great value.

A little beyond is the town of *San Luis* (population 15,000) founded in 1597 by the Governor of Chile. From raising alfalfa, land has increased in value ten fold, being now worth \$5 or \$6 an acre. Cattle raising is a special industry of the province, also the sale of green onyx, beds of which lie to the north.

Villa Mercedes, a town of about the same size, is an important railway junction. One might here take a train by way of Villa Maria to Córdoba, if desirous of visiting that historic city. From here to Buenos Aires is a region of rainfall and of wonderful fertility, the great cattle ranches, formerly covering the whole country, being to some extent superseded by the cultivation of the soil; wheat, linseed, and corn are produced in immense quantities. It may be noted in passing that Argentina is the greatest exporter (not producer) of cattle and of cereals of any country in the world. At many stations there is but a house or two, an adobe hut

occupied by an Italian or by a *gaucho*, a cowboy of mixed race, Spanish and Indian. Yet in the season 6000 tons of wheat may be seen at one of these stations, representing great wealth. The freight cars, weighing $12\frac{1}{2}$ tons, will carry a load of 40 tons, this being a broad gauge road with straight and almost level track, inclining slightly to the sea. The longest *straight* in the world is here found, 175 miles in direct line, and, but for one S curve, 206 miles. Bronzed cattlemen may be seen at the stations, and along the way thousands of splendid cattle; then a sea of cultivated limitless plain, interesting for a while, but presently monotonous to many.

Between Villa Mercedes and *Mackenna*, 40 miles, is a very rich zone containing many elegant dwellings of modern style with city comforts, amid gardens and orchards, fields of vegetables and cereals.

Rufino, another railroad center, is a station of hurry and bustle. A wonderful change has taken place in this region in the last 25 years, from a lonely expanse with a rare dwelling and a few native cattle to villages, splendid herds, and grain fields whose products always outrun the provision of sheds and storehouses. Near the station *Vedia*, the end of the *straight* from Mackenna, is the noted *estancia* or ranch of Señor Benito Villanueva of 35,000 acres, which contained some years ago 14,000 Shorthorn cattle, besides Lincoln and Shropshire sheep, and 1200 horses of Clydesdale, Suffolk, and Hackney. A station on a branch line is called Gen. Arenales after the owner of an important establishment, with creamery and cheese factory making 200 pounds of cheese a day.

A busy town is *Junín* on the site of a fort from which forces sallied Dec. 10, 1876, against an invasion of cattle-stealing Indians. The latter were routed and the cattle saved. Here are railroad workshops employing 1000 men, and an electric establishment supplying light for the city and power for the making of butter, cream, and ice. Land here is worth more than \$1.00 a square foot. Perhaps a *peso* was meant.

Fifteen kilometers from the town of *Chacabuco* is the *estancia* San Gregorio especially devoted to raising Hereford and Durham bulls, Lincoln sheep, Hackney, Morgan, and Clydesdale horses, collie dogs, terriers, and fowls of the

Wyandotte, Plymouth Rock, Brahma, and other breeds. Seven thousand dollars was paid by the owner for a single bull.

Near *Mercedes*, a city of 15,000, is an *estancia* of 40,000 acres. This in addition to other blooded stock has many race horses, now used for breeding, which formerly won fame in Europe. For one of these the owner paid \$150,000.

The station *Open Door* is so called from a remarkable governmental establishment for healing the mentally diseased by the outdoor system, work in the fields.

At *Muñiz*, 20 miles from Buenos Aires, there is a Campo de Mayo, a field for military exercises, where reviews frequently occur attracting many spectators. Close by is a famous *estancia*, that of Noberto Quirno, 4200 acres, fenced with wire, divided into 18 enclosures. Besides the pure blooded cattle, acres of the finest fruit, and an elegant residence, there is a dove-cote, supplying 40 to 50 pairs of pigeons daily.

The town, *Hurlingham*, 15 miles from the city, almost in the suburbs, is much frequented by those athletically inclined. A hippodrome containing apparatus for physical exercises is the scene of frequent hippic and athletic reunions with large and distinguished crowds. There is a race track of 2000 meters for horses, grounds for tennis, polo, cricket, etc., with pavilions for spectators, restaurant, garage, stables, and dog kennels. The whole, covering 22 squares, belongs to a society with 6000 members. At the opening of the season occurs an annual fête called Gymkchana. Among other sports is a Whistling Race. In this, after 500 yards, men must pause before a lady and whistle a tune, the name of which she hands to him on paper.

In the real suburbs of Buenos Aires, at *Villa Devoto*, 10 miles from the city station, is a rifle range established by the Italians. The field, 1000 meters long and 100 wide, has a shooting gallery 550 meters long. Of the 30 targets 24 are for guns at from 300 to 500 meters, and six for revolvers at 10 meters. English societies have here tennis and golf grounds. Among many chalets with fine gardens is one belonging to John A. Hall containing about 1500 varieties of orchids. Of two asylums in the place, one called Umberto

Primo, was the gift of the philanthropist Antonio Devoto, of which the cornerstone was laid February, 1904, by Prince Luigi de Savoia, Duke of the Abruzzi. From this suburb a tramway conducts to the city, passing on the way a Dispensary for the Tuberculous, and the National School of Agriculture and Veterinary, which was inaugurated September, 1904. Continuing by rail, one has on the left a glimpse of the river, and on both sides, of the Palermo Park, before reaching the station Retiro, a short distance from the center of **Buenos Aires**.

This wonderful city, the Metropolis of South America, which in the last half century has grown at a rate exceeded by few in the United States, was founded as early as 1535 by Pedro de Mendoza; but being twice destroyed or abandoned on account of troubles with the Indians, its permanent settlement dates from 1580. For this the honor belongs to Juan de Garay, Acting Governor of the Province of which Asunción was the capital. The latter city had been founded in 1536 by Juan de Ayolas, sent thither to discover a way through to the rich country of Peru. This colony, more fortunate than Buenos Aires, endured, and for many years Asunción was the chief city of this part of South America. Several other settlements were made in the present Argentine country before the permanent establishment of Buenos Aires: Santiago de Estero in 1553; and within ten years thereafter, Mendoza, San Juan, and Tucumán.

The name, Buenos Aires, dates from 1535 when Pedro de Mendoza, January 6, inaugurated the city of Santa María de Buenos Aires, in recognition of the sailors' devotion to Nuestra Señora del Buen Aire, their especial patroness at Cadiz; tradition also has it that on disembarking here one said to another, "Que buenos aires son los de este suelo!" "What good airs are there on this land!" The town founded February 2, 1535, was practically destroyed by Indians and abandoned in 1541. In 1580 Garay with sixty-three colonists, provisions, tools, etc., coming from Asunción, on disembarking Sunday, June 11, 1580, proceeded to an elevated spot, where now is Parque Lezama. There he pronounced in Spanish the words, "City of the Trinity and Port of Santa Maria of Buenos Aires, I baptize thee in the name of the Father, Son, and Holy Ghost." All, saying Amen, then knelt to ask a blessing on the city to be founded. Proceeding north to an open space on the wooded shore they fixed upon the present Plaza de Mayo as the center of the city and placed the first stone at the corner of Rivadavia and

San Martin. The new city was arranged in sixteen squares from north to south along the river front, and in nine squares east to west, with farms and gardens beyond. While the general trend of the river and the shore on this side is northwest to southeast, the front just here is almost due north and south, the Avenida de Mayo, at right angles, therefore running east and west.

The growth of the city was slow, being much hampered by strange regulations of the Mother Country. No commerce was permitted, either imports or exports, hence smuggling became popular. While the Viceroy at Lima was ruler of the entire country, his practical authority was here small, the *Audiencia* in Charcas (now Sucre), Bolivia, being in charge of the country east of the Andes. Subordinate to this were the Royal Governors of the Provinces, always Spanish, while the cities were ruled by *Cabildos* of from six to twelve members who were natives or creoles. These serving for life had charge both of judicial and administrative matters. The troubles with the Indians, and with the Portuguese who had settlements on the opposite bank may be passed over, but those with the British should be mentioned. At last, after about two hundred years, Buenos Aires in 1776 had a Viceroy of her own and more liberal government; unfortunately too late to undo the evil which had been wrought, although trade now flourished and the population soon doubled. In June, 1806, a squadron under Admiral Popham, and General Beresford with fifteen hundred men landed below Buenos Aires then a city of about 40,000. The Viceroy fled and June 27 the British occupied the city. A French officer, Liniers, in Spanish employ, procuring one thousand regular troops and some cannon in Montevideo, approached the city and was joined at his camp by many. The British on the advance of the army of Liniers, August 12, after hard street fighting, finally surrendered; the British flags then captured are still preserved in Buenos Aires as trophies. Four months later the British again came and with four thousand troops captured Montevideo. General Whitelock approaching Buenos Aires put to flight the army of Liniers which had come out to meet him; but on entering the city, July 5, stubborn street fighting ensued, and after forcing their way to the barricaded Plaza and losing in two days one-quarter of their men, the British agreed to withdraw and to evacuate Montevideo within two months.

This experience inspired in the Argentines a feeling of self-reliance. Accordingly when Napoleon, after he had overrun the Spanish peninsula, demanded, May 22, 1810, the resignation of the new Viceroy Cisneros, who had taken office in 1809, an armed assembly came together in the Plaza and proclaimed the *Cabildo* supreme in authority. While Acts were made in the name of Ferdinand VII,

the Spanish ruler of Castile and Leon, then in prison, this date is regarded as that of the dawn of Independence. The *Cabildo* sent armies in various directions and bloody combats ensued, several at first successful, then with varying results. There were long troublous times, though Buenos Aires never again fell under foreign sway, and the sentiment of independence became firmly established by 1812. In this year returned from Europe the great patriot, San Martin, who, through the labors of the historian, Bartolomé Mitre, is now generally recognized as the savior of South American Independence.

San Martin, born, February 25, 1778, of a creole mother and a Spanish officer father in a small mission town of the Jesuits on the Uruguay River, was taken to Spain at the age of eight years, educated in the best military schools, and served in many wars. Having imbibed liberal ideas he returned to Buenos Aires in March, 1812, and later, with a chosen company of the best youths, proceeded to Mendoza, where for three years he was forming and drilling an army for the purpose of invading Chile. This he did in January, 1817, the battle of Chacabuco, February 12, giving that country its independence. Going to Peru with his army in 1820, he proceeded himself to meet Bolívar in Guayaquil. When the latter rejected the coöperation proffered, San Martin gave up the army which he had organized and withdrew to Buenos Aires, suffering the imputation of cowardice without a word, and returning to Europe to live in reduced circumstances until his death at Boulogne in 1850.

Independence was formally declared by a Congress in Tucumán, July 9, 1816. From 1812 to 1862 civil and other wars were frequent. July 9, 1825, a National Constitution was adopted, and in 1826, Rivadavia, a very able man, became the first President. The greatest constructive statesman of the period, he undertook to reform the laws and administration, created the University of Buenos Aires, founded hospitals, etc., and engaged in war with Brazil, by which Uruguay became independent. But after a single year of office, on account of dissensions, he resigned. In 1829, following two years of strife, de Rosas became President and in 1835 Dictator. His name and his tyranny are regarded with detestation. Defeated June 8, 1852, by General Urquiza, he fled to the British Legation and later to England.

In 1853 Buenos Aires was recognized as an independent state, but in 1857 the Porteños or harbor people, as the residents of the city are called, under General B. Mitre were defeated by General Urquiza and again joined the Confederation. In 1861 another battle occurred under the same generals with a victory for Mitre, who

then became President of the entire nation and by granting the Provinces autonomy succeeded in creating better feeling. In 1868 Dr. Sarmiento, a broad-minded scholar, was peacefully elected and did much to promote education and develop the nation's resources. His successor, Dr. Avellanda, had a more troublous term of office. General Roca who followed, 1880, gained his position by hard fighting. He first declared the city the Federal District of the nation, promoted railway extension, and put down dissensions. After Dr. Celman had misgoverned for four years, Carlos Pellegrini finished the six years' term in good fashion. Dr. Saenz Peña followed in 1892, but becoming unpopular, resigned; and the Vice President filled out his administration. Another term for General Roca was succeeded in 1904 by that of Dr. Quintana and after his death Dr. Alcorta; the present incumbent, Dr. Roque Saenz Peña, taking office October 12, 1910.

Buenos Aires, the Metropolis of South America, resembles Chicago in being located on the level frontier of a great prairie, and on the border of a large body of fresh water; at the same time it is like New York in being the chief seaport of a great nation. The so-called Rio de la Plata or La Plata River is in reality more of an estuary; so wide as to have rather the effect of a bay or gulf. Formed by the union of two rivers, the Paraná and the Uruguay, the La Plata basin is the second largest in the world, the flow of the river being 80 per cent greater than that of the Mississippi. And here let me make a feeble protest against the usage, general among the English, and now copied in the United States, of speaking of this water as the River Plate. Was there ever an uglier name in sound or sense? Were there any difficulty in saying La Plata there might be some excuse. True, one is liable to commit a tautology by saying the La Plata River, a repetition of the *the* in another language, but some sins are worse, and one to my mind is changing Plata to Plate. Plata means silver. Why not then call it the Silver River, if one would translate, or else say the Plata River? I, at least, give notice here that in this book it shall be properly called. The first *a* of course has the sound of *ah*.

The river is here 28 miles wide, so that one does not see the opposite shore except from a height such as the Capitol dome. It is 125 miles long more or less, according to where you consider the ocean line, Buenos Aires being called about

100 miles from the sea and 90 from Montevideo. The city, 65 feet above sea level, has like Chicago plenty of room to grow and has improved the opportunity to extend itself until in area it is one of the largest cities in the world, three times as large as Berlin, but smaller than London or New York. Its population, according to the last accounts, 1913, is about a million and a half. Thus it is the fourth city in the Western Hemisphere and the second Latin city in the world. At its present rate of growth it will soon be crowding Paris; some day, perhaps, it may become the first in population of the cities founded and ruled by a Latin race.

CHAPTER XXIII

BUENOS AIRES

HOTELS. Plaza, E. P., 10 *pesos* and up; Palace, a little more moderate; others A. P., Grand, 9-20; Royal, 9-20; Majestic, 12 up; Metropole; Splendid; Caviezel's New Hotel; Phœnix; Albion.

Cabs. First class, 15 blocks, 1 *peso*, next 15 blocks, 50 *ctvs*; second class, first course 60 *ctvs*., second 40 *ctvs*. By the hour, first class, 2 *pesos*, then 80 *ctvs*. each half hour; second class, 1.50 first hour, .60 each half hour. Automobiles, higher.

Money. Argentine *peso*, 44 cents; double the Chilian *peso*.

Guide-book to the Argentine Republic by Albert B. Martinez, valuable; in Spanish and French, perhaps now in English.

CHIEF POINTS OF INTEREST

The Plaza and the Avenida de Mayo, the Government Palace, Capitol, Palace of Justice, Plaza San Martin, the Museum of Art, Zoological and Botanical Gardens, Palermo Park, Hippodrome, Colon Theater, Parque Lezama and National Historical Museum, Recoleta Cemetery, the Docks, *Frigorificos*, *Mercado de Frutos*.

TOURISTS coming from Mendoza will arrive at the Retiro Station. Outside are numerous carriages to convey the traveler and small luggage to his hotel. The price of these carriages is astonishingly cheap to a New Yorker, 1 *peso*, 44 cents, for a ride of 15 squares, and nearly all of the hotels are within this distance. From the docks the ride may be longer, according to where landing is made. Further, there are carriages of the second class, which seem equally good. For these the fee is 60 *centavos*. The only difference that I could learn was that the first class coachman wears a uniform. The number of horses, one or two, makes no difference. The automobiles are somewhat more expensive. The drivers have a habit, as elsewhere, especially at the sta-

tion, of demanding more than their fee, particularly on Sunday; so it may be as well to say nothing, take the first carriage offered and pay what is due with a small tip and no remarks, and something additional for baggage. Trunks should be arranged for with an agent of the express company, Expreso Villalonga, either at the station, or after reaching your hotel, if that is not already decided upon. The hotel porter will attend to it if you hand him your checks.

Unlike the cities previously visited, as might be expected from its size, a wide choice of accommodations is here offered. Hotels galore and lodging houses as well are to be found, though perhaps not a room at the desired hostelry unless engaged in advance: not always even then, if reports are true of certain establishments. There are all kinds of prices except very cheap, for this is quite another world from the West Coast, and except as to carriages, prices compare with those of New York.

The first choice of the ultra fashionable and wealthy is likely to be the *Hotel Plaza*, unless a new one promised to be still finer should already be completed. At the Plaza, barely two blocks from the station, a room may be had on either the American or the European plan. The lowest price for the latter is ten *pesos* (\$4.40) a day—and from that *far* up, doubtless 30 or 40 *pesos* or more for suites with bath. Meals are in proportion. The location is good, on the handsome Plaza San Martin, and very near the river, the American Legation is close by—but it is quite a distance, 11 blocks, from the Avenida de Mayo, the principal avenue, and many will prefer a hotel in the heart of the city on this handsome and busy thoroughfare, or one within a few blocks of it. The other hotels are somewhat lower priced and by many regarded as more comfortable and agreeable. The Plaza, under the management of the world famed Ritz Carlton people, is naturally the grand affair that one would expect, the pompous, uniformed British attendants easily leading one within to fancy himself in London.

The *Palace Hotel*, before the erection of the Plaza, regarded as the first in the city, is a large edifice, property of Nicolas Mihanovich, the noted steamboat man. This fine structure, two blocks from the Plaza de Mayo, fronts on three streets,

the 25th of May, Cangallo, and the Paseo de Julio, many rooms thus looking upon the Paseo, a fine boulevard and parkway, and out over the docks to the river. On this side there are five stories, with an observation tower at the corner 150 feet high for the use of the Mihanovich Company, and containing a powerful electric light. The offices of the company are on the ground floor of the building. The hotel has an imposing entrance with a monumental stairway (also elevators) leading to the main floor. Here is a hall of the Louis XIV style, and a luxurious dining-room of the Empire fashion with white and gold ceiling. All floors are heated and there is a telephone in every room or suite, conveniences and elegance of all kinds. Above there is a roof garden (a favorite resort on summer evenings) adorned with exotic plants, and a summer dining-room which affords charming views.

Other hotels, older and equally popular, are the *Grand* and the *Royal*, comfortable, even luxurious, much patronized by English-speaking folk. The *Grand*, built in 1900, on Florida and Rivadavia, is in the very heart of the city and by some called noisy; the *Royal* at the corner of Corrientes and Esmeralda is a few blocks distant. At these the price for room and board with bath privilege is from 9 to 12 or 14 pesos a day; for room with morning coffee only, 5 to 8 pesos a day.

On the Avenida, which means always the Avenida de Mayo, are the Hotels *Splendid*, *Metropole*, *Paris*, *Majestic*, *Caviezel's New Hotel*, all of the first rank with pension prices from 10 or 12 pesos up. Also on the Avenue near the Plaza de Mayo is the Hotel *Nuevo*, said when built to have been the acme of elegance. The *Phoenix*, San Martin 780, more quiet and less pretentious than some of the others, is much patronized by English. One preferring lower prices will find good board and rooms at the *Pension Caviezel* for from 7 to 9 or more pesos daily (elevator), an excellent location on the Avenida, Rivadavia and Esmeralda (painfully neat, some one said, which is hardly a fault), a Swiss proprietor; another pension of the same name is at the next corner, with prices a little higher. At the Hotel *Albion* on the Avenue rooms without board may be obtained, cheaper but less attractive,



AVENIDA DE MAYO

and furnished rooms elsewhere at 2-4 pesos a day, according to style and location.

Comfortably settled in a good hotel, what is first to be done? I should say, after morning coffee take a stroll around the center of the city, down the Avenue, turning to the left on Florida with a glance at the shop windows, down Cangallo to Reconquista and the Plaza at the right. If time is short begin at once sight-seeing there, the center of the old and new city, a historic site for nearly four centuries. Called by Garay, *Plaza Grande* or *Mayor*, containing 8 acres or more, it is now *Plaza de Mayo*. The center, regarded as the Altar of the Country, has been occupied by a modest monument, an obelisk called the Pyramid of May, commemorating the Revolution of 1810. For this, excavation was made in April, 1811. This will now be replaced by a great and worthy monument on the same spot to the same event, voted by the centenary commission to the competing artists, Gaetano Moretti and Luis Brizzolara. The splendid marble monument, having a base 150 feet square, will be a trifle taller, the base supporting a colossal obelisk 115 feet high, upon which will stand a group of statuary, the apotheosis of the Argentine flag: a figure representing the *New Nation* waving the sacred banner, preceded by Progress crushing down Ignorance and Prejudice, and acclaimed by Revolution, Justice, and the People. Other statues and reliefs will be used in decoration. An interesting innovation will be a large chamber within the monument to be used as a museum and to contain as a first relic the actual Pyramid of May, the first memento of the glorious dawn of liberty. This monument is to be finished and in position in 1916.

Of other monuments already decorating the Plaza, one erected in 1906 faces the Avenue, a fine group of marble portraying a figure, the *City of Buenos Aires*, being crowned by Progress; a child, the Future, observing the act. Towards the other end of the Plaza, the east, is an equestrian statue of *General Manuel Belgrano*, one of the first Council of Government, appointed by the Corporation of the City, May 25, 1810; he was afterwards a commander of Argentine troops,

gaining victories at Tucumán and Salta, in 1812 and '13, later suffering defeat in Bolivia, after which he resigned the command to San Martín. The rest of the Plaza is occupied by gardens, walks, and fountains. Occasionally there is music.

At the southwest corner of the Plaza is the ancient *Cabildo* where met, May 22, 1810, on the upper floor, a popular assembly which declared the authority of the Viceroy incompatible with public tranquillity. May 25 the *Cabildo* appointed a *Junta* or Council of Government with Don Cornelio Saavedra as President. The Viceroy having already withdrawn to avoid bloodshed, the Council took the oath the same afternoon; Saavedra addressed the people from a balcony with an appeal for order and harmony. Thus the revolution triumphed without bloodshed, and from here spread to other sections, where long struggle was necessary; to Argentina, the success in all the countries south of Ecuador was largely due.

The most imposing structure on the Plaza is the *Government Palace* on the east. On this spot in 1595 the construction of a fort was begun; but it was 1718-1720 before a considerable fortress was erected, whose walls remained till 1853. They were then demolished for a custom house, which in 1894 was destroyed to make room for the present palace. This great brick edifice, 400 feet long and 250 deep, with two wings of slightly different form, constructed at different periods, contains offices of the President of the Republic and of the various Ministers, of the Interior, of Foreign Relations and Worship, of Finance, of Justice and Public Instruction, of Agriculture, of Public Works (*Hacienda*), of War and Marine. In the building are several libraries, the most important that of the Ministry of Foreign Relations (State Department), where in iron cases are the treaties with foreign nations since 1811, some of these, real works of art, superbly engrossed on parchment with enormous wax seals. The entrance on the north side gives access to two large and elegant salons where receptions and banquets are given by the President, his official residence occupying this end of the building. The banquet salon, richly furnished in Louis XV style, contains a central chandelier, a notable work of art made in the country by Azaretto. There is also a fine marble figure rep-

representing the Argentine Republic, and there are busts of the various Presidents. Within the building are several patios and pleasant reception rooms. Sentinels abound, but the doors are open and on business days at the usual hours the building is accessible to the public. On feast days, if necessary, permits to enter may be obtained from the Superintendent of the Palace.

On the north side of the Plaza, coming from the Palace, one first reaches the *Chamber of Commerce*, in 1885 established in its present edifice, though inaugurated as a *Bolsa de Comercio* in 1854 with 118 members. It has now above 4000, and is a very important establishment. Operations in 1909 amounted to a value of 328 million *pesos*. The same year the Clearing House account for banks was $4\frac{1}{2}$ billion *pesos*.

In the same block at the corner of Reconquista is the *Bank of the Argentine Nation*, the most powerful institution in the Republic. Founded in 1902 with a debt of 50 million *pesos* in bills emitted as its capital, thanks to a rigid organic law, excellent administration, and the honesty of its directors, it has become a great financial power. In October, 1908, the capital was increased by \$17,800,000 gold. As a Bank of the State, no dividends are made, the annual profit of fifty per cent being converted into gold reserve and added to the capital. January 1, 1910, the capital was 113 million *pesos*, the reserve 39 millions gold. The bank in 1910 had 121 branches in the provinces and 8 agencies, mostly in their own buildings, making easy the commercial transactions for cattle and agriculture, in contrast to our own difficulties, due to the silly prejudice against a Central Bank, so serviceable in all other countries. It performs all the operations of other banks, these in 1909 amounting to 645 million *pesos*.

At the west end of the north side is the *Cathedral*, on the spot selected by Garay for the church in 1580, when a simple structure with mud walls and thatched roof served the purpose. An edifice with arches in the present form was begun in 1701, but the façade in imitation of the Madeleine in Paris was built in the time of Rivadavia by the architect Catelin. The great semi-spherical dome, covered on the outside with blue and white squares in the Spanish style, is a contrast to

the other roofs. The interior has a central nave, two aisles and a transept, well proportioned except for the great thickness of the pillars. The side chapels are not of especial importance save the third on the right, the sepulcher of the great *San Martin*, liberator of Chile and Peru, a patriot whose purity of motive, possibly his ability, equaled that of Washington, though he was far less happy in the contemporary appreciation of his services; not until after his death receiving his merited honors. The octagonal chapel is effectively lighted from a small dome above. Four marble plaques bear the names Lima, Chacabuco, San Lorenzo, and Maipu, reminding of his glorious deeds. In the center a bronze sarcophagus containing the ashes of the hero has several pediments upon a broad marble base which bears also four marble blocks. On three of these stand marble statues, in front, that of Liberty, at the sides, Labor, and Commerce. The block in the rear carries laurels and palms only, with a bas relief representing the battle of Maipu. In front are the arms of Argentina, at the sides those of Peru and Chile. On the right stands a bust of the great patriot, the whole forming a worthy, artistic, and most impressive monument.

On the west side of the Plaza at the corner of the Avenida, with entrance on the latter, is the *Municipal Palace* or City Hall, where the Executive Department of the City Government has been located since 1892, the Deliberative Council meeting at Peru 272. The Intendente or Mayor is appointed for two years by the President with the approval of the Senate, and may be re-appointed. The Deliberative Council of 22 is also named by the President, as the elections formerly held gave poor results. On the other side of the Avenue are the Civil Courts.

The Avenida de Mayo, in front of the Capitol, extends from the Plaza de Mayo a little more than a mile to the Plaza, about 100 feet wide, paved with asphalt, lined with trees, and with a row of posts for electric lights in the center. Cut through the block between Rivadavia, originally the main street, and Victoria, the next street south, at a cost of ten million *pesos*, it was opened for traffic July 9, 1894. It is considered by some the finest street on this hemisphere, others prefer the Avenida Central in Rio, while all who admire sky-

scrapers will insist that it is not to be compared to Fifth Avenue. Adjoining the City Hall, is seen on the right the splendid edifice erected by Dr. José C. Paz for *La Prensa*. As the finest newspaper building in the world for the sole use of a single publication, it should be visited by every traveler, though only certain parts are open for inspection. There are five stories above ground and two below, the sub-basement containing the electric fixtures and the paper storage room. On the next floor is the machinery, presses, etc., with a room at the back 120 feet long and 25 deep for the distribution of papers. On the ground floor on the Avenida are the bureaus of administration, as for advertising, etc., and the museum; while fronting on Rivadavia are rooms for free consultation with physicians and lawyers. One flight up, a long one, for ceilings are high, but there is a good elevator, are the handsome rooms of the chief editors. A fine salon with luxurious appointments, Turkish rugs, furniture upholstered in leather, sofas and armchairs, and a heavy carved table, is the reception room, where gentlemanly attendants in uniform are at your service,—a contrast indeed to the dingy hallways where people are kept, by often pert youths, from entering the sacred though bare and noisy quarters of the editorial staff of some of our great and wealthy journals. On the other side of the large patio is a handsomely decorated hall seating 500, with furniture of red and gold, used only for entertainments for the employees. On the next floor are various editorial rooms, on the fourth luxurious apartments for the entertainment of distinguished guests from abroad. At the top are rooms for photography, composing, etc. On the turret is a statue holding a powerful electric light, the rays of which are visible to a great distance. The editor of this great newspaper, which like its building in some respects, for instance in the amount of its telegraphic despatches, is superior to any in the United States, is Dr. Adolfo E. Davila, who has held the office since 1877. To him the paper owes a large share of its progress which is deemed worthy of its palatial setting.

A little farther up is the great store of Gath & Chaves, one of the best in the city, and at 633 the fine building of the Progreso or Progress Club. Opposite is the Diario building,

which in 1911 had just been afflicted with a fire. The *Diario* is an important, perhaps the leading afternoon paper. Along the way are many hotels and other business structures. Some of the buildings, like the *Prensa*, are almost covered with electric light bulbs, probably remaining from the Centennial display in 1910, when lighted obviously producing a brilliant spectacle.

At the upper end of this splendid avenue, beyond a large Plaza, is the CAPITOL, strongly reminiscent of the one in Washington, but none the worse for that. The plans were by the late Victor Meano; the cost was \$9,000,000. It may be mentioned in passing that the Plaza in front was constructed for the celebration of the Centenary in the short space of 90 days; four solid blocks of buildings were torn down, ground was filled in, leveled, and grassed, walks were laid, trees, shrubs, and flowers planted, fountains with colored waters, obelisks, candelabra, and statues were erected, and all done at a cost of \$5,000,000, in time to receive their guests in 1910. And *we* call South Americans slow! Monuments to the Constituent Assembly of 1813, the Congress of 1816, and to General Mitre are to be added.

The central façade of the Capitol, setting a trifle back from the line of the projecting wings, is adorned with a fine portico and approached by a stately staircase having on each side an equestrian statue. The central dome is a remarkable work, the pillars supporting it covering 300 square meters. To sustain the weight of 30,000 tons, the foundations were laid 30 feet deep, and an inverted dome of stone was fixed. No one should fail to visit the top of the great dome, which provides a splendid view over the city and the broad river; or the magnificently furnished reception halls and legislative chambers. The Senate Chamber, arranged for but 30 members, is a small room though provided with two galleries. The larger Chamber of Deputies has three rows of galleries, the first for the diplomatic corps with an especial reservation for ladies, some of whom come to hear the debates. The acoustics are said to be poor and the heating inadequate. There are conference rooms, a library, rooms for secretaries, etc. The Houses regularly meet from May 1 to the end of September, but the sessions are usually prolonged until January by



THE CAPITOL PLAZA, BUENOS AIRES



PALERMO PARK

Executive Decree. The Deputies meet Monday, Wednesday, and Friday at three, the Senate on the alternate days. The Chamber of Deputies, semi-circular in form, has 130 seats besides eight for the Ministers, here admitted to their deliberations. There is a platform for the President and two secretaries. Behind the Presidential chair is a portrait of Valentin Alsina.

Below the platform is a table for stenographers, two of whom write a report of the proceedings, published the day following. Members speak from their places receiving polite attention, especially noticeable in comparison with the practice in Assemblies of older nations. There is no division of seats for political parties, nor special garb for President or Ministers. Each Deputy has a desk with writing material. For each 33,000 people, and for an additional half as many more, one Deputy is elected for four years, receiving a salary of 18,000 *pesos*. Every two years one half of the House is renewed. The Senate Chamber also has seats for the Ministers. The Vice President, according to the Constitution, is the presiding officer. Strangers of distinction desiring to visit the sessions of Congress may obtain from the Secretary cards of admission to the galleries.

The characteristic of the city first obvious is its extreme neatness, in strong contrast to our chief cities; then the narrow streets of the business section and the absence of skyscrapers, each of which will seem to Americans generally an evidence of backwardness and provincialism. The former certainly is a great defect, inherited from colonial times, which the officials of recent days have been and still are endeavoring to remedy. As the widening of all the streets at once was obviously impossible, to relieve the congestion of traffic and to beautify the city, the Avenida de Mayo was constructed. Soon two diagonals, wonderfully diminishing the present difficulty, will be cut from the north- and south-west corners of the Plaza de Mayo through the busiest parts of the city. Although the streets in the center are only 33 feet wide, since the buildings have mostly but two or three stories, they do not lack air and light, as in so many of the streets of New York; the height of all buildings being limited according to the width of the street on which it stands, an

excellent and necessary rule. All of these narrow central streets are one way thoroughfares, both for cars and other vehicles. Natty policemen stand, not at a few, but at dozens of busy corners, regulating traffic. Yet in spite of their best efforts blocks are frequent, sometimes delaying cars for ten or fifteen minutes. It may be mentioned that the city has, in proportion to the inhabitants, twice as many policemen as New York, generally courteous and obliging. In order to help a little, the corners of many buildings and sidewalks have been chopped off in accordance with a law promulgated some years ago, though long not strictly enforced. Many of these old streets will be widened in time, as new buildings must be set 10 or 12 feet farther back, a temporary disfigurement, ultimately of great advantage. West of the Capitol all streets are wider. New ones must have a breadth of at least 60 feet. In the newer sections are many beautiful broad avenues, the Santa Fé and Alvear in some respects surpassing the Avenida. There is an excellent service of electric cars, one writer says the best on this hemisphere, already supplemented by a subway now being constructed from the Plaza de Mayo to Plaza 11 de Setembro. This one completed, others will be promptly begun; not as in New York ten years after they should have been finished. For in Buenos Aires, packing like sardines is not permitted, as will be discovered, perhaps with indignation, when a car marked *completo* passes without a pause, and one has to wait several minutes for a second or a third. Within, all are comfortable, the seats, each for two, facing the front with an aisle between, where no one is allowed to stand; on the broad rear platform six only are permitted. With carriages so cheap, anyone in a hurry can easily afford to patronize them. The cars with large figures in front, as in Chile, a fashion which might well be introduced in our cities, are easily distinguished; the hotel porters and the policemen being usually able to tell you two or three numbers of the several cars which may take you to your destination, and the points at which these are to be found. Also a little red guide book, *Guia Peuser*, purchasable for 10 *centavos*, will give all necessary information as to railways and electric cars, carriage tariffs, etc.

An afternoon drive may be taken in auto, car, or carriage.

Setting out in good season, one may first traverse a few streets in the center of the city, the fashionable Florida to Plaza San Martin, returning by Reconquista to the Plaza de Mayo, cross down to Parque 9th of July below the government Palace, then go by Paseo de Julio and Avenue Alvear to Parque 3rd of February, commonly called Palermo. After a drive in the park return may be made by Santa Fé and Callao to the Capitol building and upper end of the Avenue, or by other streets past the Recoleta, the Aguas Corrientes, etc.

The calle *Florida* is *par excellence* the fashionable promenade of the city. Though narrow like the others and but ten blocks long, it is distinguished from the rest by having no car tracks and is lined by many of the most fashionable shops, beginning with Gath & Chaves extending from the Avenue to Rivadavia; though to be accurate, this is on Peru instead of Florida, the old Rivadavia street being the dividing line where the names change and the numbering each way begins, instead of the Avenue as would seem more natural. Besides many of the best shops, there are on Florida many fine residences, among these one between B. Mitre and Cangallo belonging to the Guerrero family; one on the left in the Louis XV style between Corrientes and Lavalle, the home of Juan Peña; opposite is that of Juan Cobo. Beyond Lavalle on the right is the magnificent home of the *Jockey Club*, soon to be abandoned for a larger and still more costly establishment. This Club, noted as probably the richest in the world, with an entrance fee of £300, nearly \$1500, yet having a considerable waiting list, receives so large an income from the receipts at the races that it hardly knows what to do with it. Its present edifice has a noticeable façade, a fine entrance hall and staircase, on the first landing a famous Diana sculptured by Falguières. Corinthian columns, ornamentation of onyx, ivory, and azul are part of the decoration. A fine banquet hall, various dining-rooms, luxurious drawing and reading rooms, rooms for cards, billiards, fencing, baths, etc., and a few to which ladies are admitted with a member for afternoon tea, unite to make this the equal of any Clubhouse in the world. Beautiful paintings and other expensive luxuries, like tapestries and carving, contribute to the elegance of the

establishment. On moving from their present quarters to the much larger and more splendid structure now being erected near the Plaza San Martin, the Club will present this edifice to the Government to be occupied by the Department of State.

Beyond on the same side between Viamonte and Cordoba, a large building with arcades, covered by a glass roof, occupies the entire square. This, called the Bon Marché, is used mainly as an office building and contains some Bureaus of various Ministries. Formerly the National Museum and the Academy of Fine Arts were here located, but the Museum or Gallery now occupies a fine building on Plaza San Martin, with the Academy adjoining. The Florida ends at this Plaza, one of the handsomest of the city, surrounded by many splendid edifices, adorned with large trees, flowers, shrubbery; and at the upper end an equestrian *Statue of San Martin*. The Art Museum is at the east end of the north side; farther west are stately residences, as also on the south side. Here, between Florida and Maipu is the office of the *United States Legation*, easily distinguishable by the United States Coat of arms above the door, should the flag not be floating from the projecting staff. Happily in the South American countries visited, the legations are all suitably housed, though it is said that at least one Minister of ours to Argentina, paid more for his house rent in Buenos Aires than his entire salary. It is obviously not a position to be sought at present by a man with only his talents to recommend him. Returning by Reconquista one would pass many fine business blocks, including banks.

Driving past the Government Palace and turning down to the left, we come to the *Parque 9th of July* in the rear of the palace, from which we proceed again north on the way to Palermo. Buenos Aires boasts of 74 parks and plazas altogether, with an extent of 10 million square meters. The 9th of July is modeled after the Champs Élysées, having a broad avenue with gardens of the Renaissance style on each side. It begins at the south with a half circle in which a statue, probably Rivadavia, was to be placed. In the middle is a circle with an artistic fountain by the French sculptor Moreau, and at the north end, opposite Cangallo, is a pretty

fountain by an Argentine artist, Lola Mora. Along the way are cafés, restaurants, and concert halls.

Proceeding along the *Paseo de Julio*, with its line of shrubs and flowers, one may continue by the fine *Avenue Alvear* through the most fashionable quarter of the city. The Avenue, bordered with flowering trees and palms, is lined with palatial mansions, in the midst of beautiful grounds and gardens. At the fashionable hour this avenue is filled with vehicles, rented victorias, the stately carriages of the residents, and many automobiles, which although numerous have not yet seemed to lessen the multitude of carriages.

Almost too soon the Park is reached, its formal title, the *3rd of February*, recalling the defeat of the tyrant Rosas in 1852 by General Urquiza with an army of soldiers from Argentina, Uruguay, and Brazil, Rosas then fleeing to an English ship and to permanent exile. He formerly resided on the site of the Round Point. This park covering 3,677,000 square meters corresponds to Central Park, New York, or Hyde Park, London, though it is more at one side, being on the border of La Plata River. The many beautiful, shaded avenues are, on the *dies de modo* or days of fashion, thronged with carriages before or after dinner according to the season, when thousands of people may be seen enjoying the spectacle as well as the fresh air, the ladies displaying magnificent toilets for the pleasure of all beholders.

The drive should be continued to the lake, where the charming pagoda-like *Restaurant of the Lake* will be admired. At certain times and seasons, it is quite the thing to enjoy here at the price of three *pesos*, a cup of afternoon tea, etc., to the accompaniment of a good orchestra. At a kiosk on the round point of the lake, *La Granja Blanca* offers for refreshment sterilized milk and other dairy products. Not far distant is the *Restaurant Palermo*, to which persons wishing to dine there are gratuitously conveyed from the center of the city. Excellent entertainment with good orchestral music is said to be provided at a moderate price for this city.

Within the area of the park are included enclosures for various sports. Close to the lake is the ground of the Cricket Club with chiefly English members. Enclosed by the avenues Pampa, Ombu, Alsina, and Palomar, covering a space of

about 125 acres, are the *Golf Links of the Argentine Club*, with a course of 5300 yards. A *Gymnastic and Fencing Club* possesses a fine court for their exercises, where much frequented contests are often held, as also in the bicycle track. The northwest end of the Park is occupied by a Rifle Range, covering 10,000 square meters. An imposing façade is flanked by two towers 60 feet high, from which a magnificent panorama may be witnessed. Three large gateways with glazed iron doors open into a vestibule 80 feet long, from which two doorways lead to the shooting galleries, 300 feet long and 20 wide; 38 targets all double and movable give ample opportunity for shooting, eight at a distance of 150 feet for revolver practice, twenty at 1200, and ten at 1600 feet, for rifle shooting. Shields of iron and banks of earth give protection against poor shots. Admission is free and any one by paying for the cartridges will be supplied with arms and allowed to practice to his heart's content. Contests both national and international are frequently organized.

Near the rifle range is the great hippodrome. Beyond it, outside the park, is a field of 30 acres belonging to the *Argentine Sporting Association*. This contains a track of 3500 feet for trotting races with sulkies, and one of 3200 feet for obstacle races with hurdles, fences, and ditches of water. The space in the center of the course is used for polo and football. Clubs from Uruguay and South Africa have participated in games held here by the Argentine Football League.

The glimpse now gained of the *Argentine Hippodrome* will incite to a visit on one of the gala days, Thursday and Sunday, when many will enjoy a display superior to anything of the sort previously witnessed. Nothing in the United States approaches it. While some Americans asserted that this was the finest Racing Ground in the world, a gentleman of Buenos Aires stated that it hardly equaled Longchamps. However, the *buildings* here are superior. The spectators are accommodated in a row of great white stands, that for the especial use of the members of the Jockey Club and their families being largely of white marble and capped with a graceful roofing. Behind the upper rows of seats is a spacious promenade with tables for afternoon tea, and farther back large and well appointed club rooms.



JOCKEY CLUB STAND, HIPPODROME



CENTENNIAL EXPOSITION, RURAL SOCIETY

THE
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OF
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1905

Worthy of attention is the long series of other white buildings, elaborate and spacious, for all required purposes, also the space enclosed by the track: not the usual bare field but a plat decorated with flower beds, greenery, and rivulets crossed by little white bridges. There are three tracks one inside another, the outermost a mile and three quarters in length. The grounds outside the track are embellished with flowers, lawns, and trees, the eucalyptus, pines, and palms; an excellent band discourses music; while a throng of gaily dressed people, the men (at least the Argentines), in faultless attire, the ladies in elegant Parisian costumes with a liberal display of jewelry, contribute to the brilliant spectacle.

The season is a long one, continuing from March 4 to December 30, with 56 regular functions. The races are of a high order (the riders generally Argentine), the most important being for the Jockey Club Prize, Sept. 8, the Cup of Honor, Sept. 16, the National Prize, Oct. 7, and the International, Oct. 28. These are the true Society events, the dates varying slightly with the year. On these occasions the throng is so great that movement is impossible. In 1905 the winner of the National Prize received \$27,000 and the sale of tickets reached \$346,000. In the year 1906, the betting at two *pesos* a ticket was equal to \$20,000,000. Persons of distinction or with influential friends may be able to procure an invitation to the official stand. For seven *pesos*, tickets may be purchased admitting to everything *except* that, or for two *pesos* to the old stand and four to the new.

To attend the races one may go by train, every five minutes, from Retiro Station, by tram (15 *ctvs.*) marked Carreres from Parque de Julio, by carriage at two *pesos* an hour, or with a livery carriage for 15 *pesos* the afternoon.

CHAPTER XXIV

BUENOS AIRES—CONTINUED

LEAVING Palermo Park by the broad Ave. Sarmiento, one has on the left the Zoological Garden; on the right, a feature of Argentine life of the highest importance, the buildings and grounds of the *Rural Society*, granted by the Government to the Society for the annual agricultural and cattle shows. Upon grounds which cover 180,000 square meters are fine pavilions for various purposes; stables accommodating 500 horses or cattle, park room for 736, a roofed space for 3500 sheep, an enclosure of 4500 square meters as show ground, with two stands seating 2000 persons. There are three large pavilions and others smaller for the display of agricultural machinery and products, and an immense kiosk for the products of the dairy. The exhibitions, occurring in the months of September and October, concluding with horse races, are a social event. In order to appreciate the leading position in such matters held by Argentina, one must attend one of these expositions, so well conducted as to have attained a degree of perfection unsurpassed in the world in the number and pure blood of animals exhibited. These expositions, organized by Señor G. A. de Posadas in 1858, have been a powerful influence in the improvement of stock and in the pride taken in blooded animals. They were the starting point of Argentine stock breeding. The *Sociedad Rural* was organized in 1866. During the Presidency of Sarmiento 1868-74, an Agricultural Bureau was organized, and in 1898 the Ministry of Agriculture, a prime necessity in view of the staple industries of the country. 1905 was the record year for the exhibition of cattle, with 2389 head, after which a limit was fixed to the number of entries in each class by one exhibitor. The variety of cattle most favored is the Shorthorn, forming 88 per cent, 9 per cent are Herefords and there are some Dur-

hams and other breeds. Of the sheep, more are Lincolns, of horses, Clydesdales and Percherons, with some Morgan race horses. The leading nations of Europe took part in the International Exposition, June, 1910. At the National Exhibition in September, the sales amounted to over \$7,000,000.

A separate Fat Stock show is now held, with high priced sales and with frozen meat sent to England. Congress has devoted 100,000 *pesos* annually to such an exhibit.

The fine studs of the country contain 400 thorough-bred stallions and 3000 brood mares, producing 1500 foals yearly. There are 66,500 thorough-bred horses. Ormonde, purchased for £19,000, was sold in the United States for £23,000. Diamond Jubilee cost 30,000 guineas, Flying Fox 37,000. Cyllene, bought for £30,000 was sought for at double the price to be returned. The sons of these horses, raised in this splendid climate, are excellent runners.

In the agricultural section are exhibited cereals and other products; from the north, coffee, cotton, and tobacco; more important, the linseed, wheat, corn, and rape, also beans and peas, woods, fruits, wools, ostrich feathers, grape and wine products, potatoes, sugar cane, yerba mate; minerals,—marble, onyx, petroleum, silver;—agricultural machinery, pumps for watering stock, windmills, engines, threshing machines, shearers, locust destroying machines, etc.

At the Round Point of this Avenue is a *Statue of Domingo F. Sarmiento* (after whom the avenue is named) by the sculptor Rodin. Unveiled May 25, 1900, it represents Sarmiento advancing over the laurels which have fallen at his feet, his face expressing the serenity, decision, and energy, which characterized him.

The statue rests upon a block of marble, on the face of which Apollo, the god of light and thought advances, dispelling shadows, while the Python, representing Ignorance and Foulness slinks back in death. Two other statues in the Park are, one, in front of the Administration Building, of Dr. Carlos G. Burmeister, who was many years director of the Museum of Natural History, the other of Dr. Eduardo Costa, a remarkable jurist who rendered great services to the State.

On the Avenue are seen two bronze lions, reproductions

of those at the Palace of Luxembourg in Paris. They have been much admired, as the most perfect representations of these animals yet produced.

At the end of the short Ave. Sarmiento is the Plaza Italia, adorned with a striking monument by the sculptor Macagnani of *General Giuseppe Garibaldi*, the gift of resident Italians and Argentines uniting in a sentiment of fraternal admiration for the hero, who is here represented on horseback. The monument, inaugurated June 2, 1904, has below at the sides of the pediment two statues; one, Victory, who many times crowned the hero with laurels, the other, Liberty, for which he shed his blood. Excellent bas-reliefs represent episodes in Garibaldi's life.

In the angle between Sarmiento and Avenue Las Heras is the entrance to the *Zoological Garden* and between the latter and Santa Fé an entrance to the *Botanical Garden*, this not always open, the principal gateway being in the middle of the side on Santa Fé, No. 3951. To each of these Gardens an entire half day should if possible be devoted and some persons would enjoy a longer time in each. Now observing only their location, we return to the city in time for dinner by Ave. Santa Fé, a street about ten miles long, extending from Plaza San Martin out to the suburb Belgrano. At No. 3795 adjoining the Botanical Garden is the *National Conservatory of Vaccination* (dependent on the Department of Hygiene) where children are vaccinated by thousands and from which vaccine is sent to all parts of the Republic except the Province of Buenos Aires. On the other side of the Avenue, on the corner of Uriarte, is an Association of young Society ladies, called Las Filomenas, its purpose that of giving to poor children a practical education by teaching them a trade. A new route will be by the broad Ave. Callao to Ave. de Mayo, but thus will be missed many fine residences on Santa Fé which, however, will keep for the next time.

To see the *Botanical Garden* one may drive rapidly about, or take the leisurely walk which is necessary fully to appreciate its beauties. This important institution, said to be unequaled in the world, is the work of the celebrated Carlos Thays, its organizer and director. His red brick residence is directly in front of the main gateway. Just within the



BOTANICAL GARDEN



ZOOLOGICAL GARDEN, HOUSE OF ZEBUS

entrance is a plan of the grounds, extremely useful in enabling one to visit parts of especial interest or to make a systematic tour of the entire garden. In this limited space is found a collection of the leading characteristic flora of the whole earth. The climate lends itself remarkably to the formation of such a collection, permitting both tropical growths and those of the cooler parts of the earth. Here are hot houses, a fernery, a Louis XV, and a Roman garden, industrial and medicinal plants, fruit trees, *yerba mate*, aquatic plants, a department of acclimatization, Argentine flora, and sections devoted to Europe, Asia, Africa, North, South, and Central America, Canadian pines, and Sahara palms, a wonderful variety of rich colors and luxuriant growth. Naturally the Argentine collection is fullest, practically perfect, exhibiting, in specimens from Tierra del Fuego to Mendoza and the Chaco, a good portion of the varieties of the globe. A flourishing *Victoria Regia* is in the little lake of the garden of Louis XV. A truly delightful afternoon will be spent by many, and another will be passed near by.

The *Zoological Garden* may be entered from the Plaza Italia, fee 10 *ctvs.*, or at two other points. Coming from the Plaza one's attention may first be attracted by the sight of a white llama all saddled and bridled, looking in the summer, very quaint with his wool clipped off. (Perhaps it is allowed to grow in cold weather.) A little boy or girl may be enjoying a ride on his back. The animal is tame but must be gently handled. The Garden is a captivating place. Among beautiful lakes and trees is a charming array of artistic and elegant pavilions for the various animals, these in general constructed in the style of architecture of the country from which the residents have come. For the elephants there is, with a spacious yard for exercise, a splendid mansion, where a little one was born in 1906, a rare occurrence in captivity. An imposing edifice houses a large variety of bears including the white polars; an Egyptian temple contains gorillas and chimpanzees, an Indian palace, the zebu, in correct style of architecture exhibiting the fantasy of the race. The extensive palace with the ferocious animals, lions, Bengal tigers, panthers, jaguars, etc., is of especial interest at feeding time. An immense cage contains condors, eagles, and other large

birds, while smaller ones hold other varieties, lovely white parrots, and some entirely pink with curious head feathers, probably macaws. These, with the beautiful white peacocks, are especially fascinating; the black and white swans are noticeable. Many other animals, snakes, etc., too numerous to mention, are also on exhibition. In attractive restaurants a large dish of ice cream may be had for 30 *ctvs.*, and various other viands.

Less extensive than the great collection in the Bronx, the animals are more magnificently housed, and across the beautiful lakes the Garden has many vistas of romantic beauty.

In the central portion of the city are many attractions meriting the attention of the tourist. The *Museum of Fine Arts* on Plaza San Martin, northeast corner, contains a worthy collection of paintings, chiefly of the modern French School. This Museum, decreed by the National Government, July 16, 1895, was organized by Edward Schiaffino and opened Dec. 25, 1896. The collection has been formed from a legacy by Adrian E. Rossi of 81 canvases, donations from a large number of private individuals, works of art belonging to the State previously scattered in various public buildings, and by many purchases. It includes a considerable number of pieces of sculpture. Among the paintings of various schools may be observed the familiar names of Puvis de Chavannes, Meissonier, Van Ostade, Luca Giordano, Corot, and dozens more. The collection is well arranged and lighted, and a full half day is requisite to give a cursory glance at the fine works of art here assembled.

A number of private galleries in the city afford evidence of refined taste and of the desire of persons of great wealth to acquire collections of artistic worth. To visit these in the homes of their possessors, persons desiring the privilege should endeavor to procure a card of introduction, though in some cases permission may be gained by direct application to the owners, who courteously receive strangers, whether amateurs or artists. The gallery of the estate of José Prudencio de Guerrico, Corrientes, 537, is a museum of art as well as picture gallery, called one of the first in South America. With many others it contains works of Daubigny, Corot, Diaz, Meissonier, Greuze, Rosa Bonheur. The gallery of Parmenio

T. Piñero, Corrientes, 633, has a splendid specimen of Sorolla, a fine example of Castro Placencia, with works of Doré, Bonheur, Fortuny, etc. At Talcahuano 1138, the salon of Laurent Pellerano presents paintings, classical, international, and Argentine, 40 of Italian artists, 18 Spanish including Murillo and Sorolla, 9 French and a good number of Argentine. In the salon of Dr. Joseph R. Semprun, Tucumán 757, is a collection of various styles, with many fine works purchased in Europe since 1830. The gallery of Jean Canter, B. Mitre 516, contains paintings, sculpture, pottery, and engraving of various styles and periods. The gallery at Maipu 929, belonging to Piladeo Soldaini, open on Sundays from one to three, has a collection especially of Italian and Spanish artists with more than 50 different signatures. At Paraguay, 1327, in the home of General Garmendia are 150 paintings including canvases of rare merit by unknown and by famous artists, and portraits of members of the family, with an interesting museum of armor of the fifteenth and sixteenth centuries, fire arms, poniards, and daggers of various periods, historic swords of Gen. San Martin, Rozas, and others, and personal relics of the Paraguayan war in which the General was engaged.

The *Museum of Natural History* at the corner of Peru and Alsina, with entrance on the former, is of great value; but in 1911 was so badly housed that a small portion only of its treasures were visible. Decreed by the Assembly, May 27, 1812, and actually installed after an ordinance of Rivadavia, Dec. 31, 1823, little was accomplished until the fall of the tyrant Rozas. At length the post of Director was offered to a professor of the German University of Halle, Charles Germain Conrad Burmeister, who, by a previous journey to Brazil and Rio de la Plata, had greatly advanced scientific knowledge of the fauna and flora of these regions. Dr. Burmeister, landing in Buenos Aires September, 1861, developed the institution into a renowned scientific establishment. The remarkable paleozoologic section has a world wide reputation. Fossil animals of the antediluvian epoch, largely derived from the Argentine pampa, were reconstructed by the scientist, who wrote many works embodying the result of painful research in reference to prehistoric creatures. After 30 years

of service the great scholar at the advanced age of 95, resolved to retire, but anxious for the continuance of his work he first secured the appointment of Dr. Charles Berg, previously in Montevideo. To Dr. Burmeister, who believed that the Museum was for the benefit of science and not to gratify idle curiosity, is due the fact that the Museum is so badly housed; as when a new edifice was proposed he said he would be buried there rather than leave. Many improvements in the display of objects have been made by Dr. Berg, but want of light and space is apparent, and the collection will soon be transferred to a building in consonance with its merits. The present edifice is an ancient cloister of the Jesuits in which the University was installed Nov. 3, 1783. The greater part of the visible exposition is up one flight. Of especial interest are the enormous skeletons of pre-historic animals. The Museum has five sections, including Zoology, Paleontology, Ethnology, Botany, and one of Geology and Mineralogy; also a library of more than 10,000 volumes, chiefly important works for the study of Natural History.

No one should fail to visit the *National Historical Museum* in the Parque Lezama, open on Thursdays and Sundays from noon to four, and entered from calle Defensa, 1600. The six rooms and a gallery are so crowded with relics that the Government is planning the construction of an edifice more worthy to preserve the trophies of the glorious record of the country's history. The better one's acquaintance with this history, the far greater pleasure in the examination of these relics of the past; but at least a casual glance is due from every traveler. The Museum was created in 1890 as a municipal institution by Señor Adolph P. Carranza, with 191 objects: private donations, and trophies previously preserved in the Government Palace and the Natural History Museum. In 1891, it became national in character and since Sept. 1897, it has been in its present locality. In 1907, it contained 4500 pieces, not all on exhibition on account of insufficient space. At the left of the entrance are the offices, at the right, the salons. The library, originating with a gift of Director Carranza, contains 1500 volumes of American History and MS. of great importance. The Museum has a rich collection of numismatics, 4000 pieces, including rare examples of medals

commemorating the epoch of Independence, and many of other periods. In the first salon may be seen on the left a celebrated plaque of silver with reliefs in gold sent in August, 1807, by the Corporation of Oruro, Bolivia, to Buenos Aires, and to General Liniers, to commemorate the retaking of the city. Above is the sword of the British General Beresford, surrendered by him at the time of capture. From the plaque is suspended a shield no less famous, called *Tarja de Potosí*, of gold and silver, presented by the ladies of that city to the general and patriot, Manuel Belgrano; and with this are medals in memory of his triumphs at Salta and Tucumán. In this and other rooms are two royal Spanish standards, one dating from 1605; portraits of Viceroy's; explorers, as Valdivia, Mendoza, Ponce de Leon, discoverer of Florida, Pizarro, and others; many pictures of battles; furniture, dishes, and other relics of distinguished men. At the doorway of the third salon, is a silver statue of the British Minister, George Canning, presented in 1857 to Dr. Alsina. In the salon is a reconstruction of the chamber in which San Martin lived and died, the furniture, pictures, etc., given by his descendants, with pictures of the battles in which he fought, and a hundred other interesting objects. In the fourth room is preserved under a glass his uniform as Protector of Peru, and his saber of Moorish style. Medals, flags, and various other interesting relics are here also. The sixth room has, with other relics, trophies, and representations of the war with Paraguay.

The Libraries of the city will be visited by tourists of literary tastes if not by others. The *National Library* was founded at the very birth of the nation in 1810, by the Revolutionary *Junta*, who placed in charge Dr. Mariano Moreno. In 1796, the prelate, don Manuel Azamory Ramirez, had at his death left his books for this object, but the English invasion in 1806 delayed the execution of the plan. The project received enthusiastic support in the substantial form of gifts. Installed in a house of the Jesuits where it remained till 1902, it was then removed to its present quarters on calle Mexico, 560-566, soon to be enlarged. A fine vestibule and staircase lead to the spacious reading-room. There is a handsome hall for lectures, and the ordinary appurtenances of a library. The institution in 1880 passed from the hands of the City to the

Government, when Buenos Aires was federalized. The building, heated in winter, is then open from 11.30 to 4; in summer, from noon till 5. The last figures obtainable were of 200,000 volumes and 10,000 MS.

Equally interesting is the *Library* of the late *General B. Mitre*, preserved in his former residence, San Martin, 336, where he died; this, Congress has decreed a public monument in recognition of his glorious services to the nation as a statesman, a writer, and a soldier. The dissipation of the library would have been a public calamity. It is a bibliographic treasure, amassed by General Mitre during fifty years of active intellectual life. It is distinguished by American historical works, especially documents and MS. collected for his own writings, the *Story of Belgrano*, 3 vol. and of *San Martin*, 4 vol. The library has twelve sections, including the works on the pre-Columbian native races of America, their languages, culture, geography, etc.; the discovery of America; further exploration; Rio de la Plata in general and particular; Spanish America; Portuguese America; North America; boundary limits, laws, seals, constitutions, treaties, etc.; with letters and stamps. I was interested to observe under glass a letter written by Sidney S. Rider of Providence, informing the General of his election as an Honorary Member of the Rhode Island Historical Society, an evidence that his fame had reached one corner of the United States.

The *Library Rivadavia*, Lavalle, 935, founded May 20, 1879, by the Bernardino Rivadavia Association, is free to readers, but the members pay one *peso* a month for the privilege of taking out books. It contains about 30,000 volumes.

The *Library of the Sociedad Tipográfica Bonaerense*, Solis 707, with more than 5000 volumes, is noteworthy as receiving all journals and reviews of the Republic. Open 7-10 p. m. Entrance free.

There are especial libraries: that of the *Faculty of Medicine*, Córdoba 2180, open daily to students and the public, and having more than 20,000 volumes, that of the *Law*, Moreno 350, and that on *Education*, well stocked on this subject, for the use of teachers and others who may apply. The library



PATIO IN NEW HALL OF JUSTICE



COLON THEATRE



of *La Prensa* is open to the public from 2 to 7 and from 9 to 12 p. m.

In this connection reference to the newspapers seems appropriate. The leading journals publish news from every corner of the globe, all that is worthy of interest: they contain much more foreign news and cable dispatches than any New York paper. Instead of the enormous quantity of trivial gossip about public and private individuals which forms so large a part of the reading matter of most of our papers, they have in addition to real news of State, and of mercantile and commercial matters at home and abroad, articles scientific and literary, information as to art, music, and every field of activity. In their high ideals of duty in molding public opinion and in correcting abuses, they are regarded by foreign critics as among the most important and advanced of the world. To this, the first rank of their press, belong the *Prensa* and the *Nación* among morning papers, the *Diario*, of afternoon. These, with *El País*, *Tiempo*, *La Razon*, and *La Patria degli Italiani* show the highest degree of excellence as to their illustrations, typography, material, and housing. *La Nación*, originating in 1857 under the name *Los Debates*, was edited by Gen. Mitre until 1862, and in 1870, took its present name. It is noted for the elegance and literary character, as well as for the intrinsic value of its writings. There are more than 400 publications in the Republic including 100 in foreign languages, many naturally poor and ephemeral in character. There are some excellent illustrated papers; *Caras y Caretas*, the *P. B. T.* and *La Ilustración Sud-Americana*.

On the Plaza Lavalle are several important buildings of great interest to every tourist. On the west side is the new *Palace of Justice* on a site formerly occupied by the Artillery Armory, a work of much splendor both without and within; the edifice, of the neo-Greek style, constructed by Joseph E. Bernasconi after a design by the French architect, Norbert Meilliar, at a cost of about a million and a half dollars. The main building, 125 feet in height, has seven stories, the four central bodies surmounted by a cupola. Steps lead from the Plaza to a broad portico and vestibule, from which fine stair-

ways conduct to the third floor, the seat of the Supreme Court. Other great staircases lead up from north and south; from Laval street is a covered passage way admitting vehicles with criminals. On the main floor are the chambers for Federal Courts and their Secretaries, the Criminal and Correctional Tribunals. A Jury Hall is an amphitheater seating 700. The Supreme Court Room on the third floor, 70 by 38 feet and 60 feet high, is separated from the front by a fine gallery looking upon the plaza. Every floor is arranged for eight tribunals or courts, each with audience chamber, private rooms for judge and secretaries, and rooms for employees. There are several patios adorned with beautiful columns, one in style somewhat after the Caryatides of the Erechtheion in Athens. The archives will be kept on the ground floor: the three upper stories are reserved for use when needed. Six passenger elevators and two freight supply required service.

On the opposite side of the plaza is a building which to many will be still more attractive, the *Colon Theater*, without its equal in America, and some say in the world. No shops disfigure the ground floor, nor do any of the façades resemble the walls of a prison. The exterior is of the Ionic order of architecture below, the Corinthian above, and at the top a rather composite construction. The height to the cornice is about 80 feet. From the main entrance on the plaza a vestibule leads to a hall 45 by 90 feet and 80 feet high, from which a staircase 45 feet wide and adorned with 16 large statues conducts to the level of the orchestra chairs of the auditorium, one of the largest in the world, accommodating 3570 persons. The entire length of one balcony is nearly 250 feet, 10 more than that of St. Charles in Naples. The floor space 90 by 70, has 900 chairs on 7 levels. The stage, 60 feet broad and 65 feet high, from foundations to arch is 150 feet. The building is fire-proof, with fine acoustic properties, and the best of light, heat, and ventilation. The cost was nearly \$2,000,000. The theater is a government building where operas are performed by the leading European artists, Mascagni and others conducting. It has been said that the Argentines discover the great singers; later they come to New York. The seats are more expensive than at the Metropolitan and the audience is as brilliant as any in the world.



TOMB, RECOLETA CEMETERY



RECOLETA PARK

The edifice north of the theater deserves more than a passing glance, a beautiful school building called the *President Roca*, fitted with all the latest improvements and containing a charming patio at which every one should take a peep, since this may be done without disturbing the inmates. An equally beautiful school building is the *Sarmiento* on Callao. On the opposite side of the Plaza Lavalle is another excellent and well equipped school.

Many theaters there are besides the Colon; the *Opera*, at Corrientes 860, now used for light opera, the *San Martin* on Esmeralda 257, the *National Theater* designed for the representation of works written in the country, and many more of all classes including vaudeville and cinematograph, as may be seen by consulting the daily papers. The performances begin usually at 8.30, sometimes at 9. For the opera, full dress is *de rigueur*, the ladies *en décolleté*; and the spectacle on a fête day, as the 25th of May or 9th of July, should not be missed by the tourist.

At the *Colisée Argentin*, Charcas 1109, is a permanent circus of modern arrangement accommodating 1700.

In the city are many *Conservatories of Music* and musical societies. Concerts are given in various places, besides those in the Parks by the excellent military bands.

Six blocks west of Plaza Lavalle and two north, facing Paraguay street, is a fine building occupying a whole block, the purpose of which would hardly be suspected. Instead of the public institution which it might be supposed to contain, it has indeed public works, tanks containing the city's water supply. It is called the *Agua Corrientes* and may be inspected within, on a permit to be procured from the President of the Commission, Rivadavia 1255. A fine view of the city will be enjoyed from the roof.

The building opposite is the *Normal School for Girls*.

A little farther west is the building of the *Medical School*, facing Córdoba, and on the corner of Los Andes. The fine edifice contains offices, lecture halls, a large amphitheater, laboratories, dissecting rooms, library, etc. The handsomely decorated salon where degrees are conferred has a ceiling of artistic merit representing the triumph of Science. Paintings on the walls illustrate some of these, such as Jenner in-

noculating with the first vaccine, Pasteur examining cultures of microbes, and many others. In the amphitheater is a large painting by Charles Leroy, representing *Meditation upon Death*, presented by Dr. Toribio Ayerza. The school has annexes for Pharmacy and Dentistry and in a separate building a School of Obstetrics for midwives. Opposite the Medical School, is the *Maternity Hospital*, and connected with the former the *Morgue*, equipped in the finest manner with refrigerators and every facility desirable for such an establishment. The public entrance is on Junín. The standard of the Medical School is so high that only about 60 per cent of its students are graduated. Other departments of the University are located in different parts of the city. A beautiful structure of the Gothic style of architecture has been designed for the Law School. The Agricultural School in the suburbs has commodious buildings and large grounds.

The *Recoleta Cemetery*, no one should fail to visit. Well within the city, it is easy of access by car or carriage, in the direction of Palermo Park but not so far,—a city of the dead among the living, a *crowded* city with no room for more, save in the lots and tombs already well filled. The Municipal Cemetery now in general use, supplied with a crematory, is the Chacarita, five miles from the Plaza. But in the Recoleta are monuments to many Argentine heroes, and splendid works of art which would adorn any gallery. To mention even the most notable of these would require too much space. A few only may be named. In a chapel near the entrance is a great marble Crucifix by Monteverde, the Christ represented in realistic agony. A beautiful statue of *Grief* by Tantarini stands upon the tomb of Quiroga. The finest of the tombs is said to be that of Dr. François J. Muñiz, physician, soldier, and philanthropist. A superb female figure of bronze representing *Science*, is seated below, a bust of the physician is above. The tombs of Ayerza, of Ocampo, and others are also adorned with beautiful statues of allegorical figures. A full half day should be allowed for a careful study of the works of art and the tombs of many famous Argentines.

A visit to the *Frigorificos* and to the *Docks* and *Harbor* should be on the programme of every tourist. Those who care for such things may like first to visit the *Slaughter Houses*



MERCADO DE FRUTOS AND RIACHUELO



BUILDING OF PUBLIC SCHOOL, SARMIENTO

on the edge of the town, the extreme west, at a place appropriately called Nueva Chicago. These, inaugurated March, 1900, occupy an immense rectangle on Merlo, Arco, and San Fernando streets, about 1200 by 3000 feet. The *abattoirs* against the outer wall cover each 400 square feet and the courts for the animals, 15,000 feet; room for 30,000 head of cattle. All arrangements are of the best fashion, with suitable constructions for every necessity, including a crematory for useless animals. To see the animals slaughtered, a visit should be made in the early morning. The tramways leading thither may be taken on calle San Juan or on Rivadavia; round trip by the former, 70 *ctvs.*; by the latter 10 *ctvs.* each way. An hour must be allowed for the journey.

Many who will prefer to be excused from visiting slaughter houses may yet enjoy a visit to the great *Frigorificos*, where no unpleasant sights need be witnessed, but where some insight may be gained into the wonderful industry which has been so great a factor in the rapid increase of Argentina's wealth. An electric car will take one to the bridge across the Riachuelo, an important structure of iron opened in August, 1902, of immense service to the teams carrying loads to the Central Produce Market, the *Mercado Central de Frutos* (not fruits), where cattle and agricultural products are sold for export, an immense traffic, the most important, it is said, in South America. As long ago as 1906, 5000 vehicles daily crossed this bridge. At the left on the other side is the *Frigorifico La Blanca*, opened Sept. 1903, an establishment of imposing appearance and completeness with its courts, offices, and warehouses. Passing some of these, one comes to a pool in which animals by the hundred are bathed before going to the slaughter house, whither *we* are not obliged to follow. Here is a track on which run automatic cars transporting the slain animals to the air chambers. Three boilers of 200 horse power, a depot of ammonia, a fire engine and two electric light installations are beyond the three refrigerating chambers, which will accommodate at the same time 7000 beef and 70,000 sheep. The pipes of ammonia are 60 miles long. To see rows on rows of hanging cattle covered with a thin coating of snow as it appears, really frost, which on pipes and walls is a quarter of an inch thick, is quite im-

pressive. The *fortunate* visitor may be regaled by the English Superintendent with a hospitable cup of tea.

Beyond this establishment is the *Mercado de Frutos*, the great wool market of the world, where other products also are sold, grain, cattle, fruit, etc. The iron building which covers over 30 acres cost \$4,155,000 gold. It contains 72 cranes and elevators, 44 hydraulic presses, motors, engines, etc. With a capacity of over 50,000,000 lbs. of wool the greatest quantity yet stored was in Feb. 1901, when there were 35 million lbs. within and 5 million in wagons outside. To see the wools being sorted, and other operations, and at other times of the year the different products of the season is of very great interest.

Above the bridge, the *Frigorifico La Negra*, founded in 1883 by Sansinena, employs nearly 700 men and boys, has four Stern refrigerating machines, and three from Switzerland, and with a capital of \$3,000,000 pays annual dividends of from 18 to 50 per cent. Another establishment called *Frigorifico Argentino*, a joint stock company, is nearly as large as the *Mercado dos Frutos*. A single man kills 6000 sheep daily, so skillful is he and so perfect are the arrangements. In connection with the beef is a department for making Liebig's Extract. Many interesting operations carried on here would take too long to describe.

A great establishment in this quarter is that of Domingo Noceti & Co. with immense workshops, foundry, iron-work, etc., connected with the railway.

On the way thither or on the return, several important institutions may be passed or visited.

The *Hospital Mercedes for the Insane*, established in 1863, is well located on the calle Brandsen, on high land with fine large buildings and grounds, the latter including well paved, shaded streets, parks, and gardens. It has separate apartments for persons needing continual surveillance, and for all grades and conditions, each section with refectory, salon, dormitory, etc.; also workshops for the manufacture of many articles, and opportunities for gardening, painting, music, etc., for those who are able to work. At one time there were more than 1000 poor patients and 132 paying. Baths, medicinal and plain, a gymnasium, library, music, and billiard rooms



PASEO COLON, GRAIN ELEVATORS IN THE DISTANCE



DARSENA NORD AND MARINE SHOPS

THE
JOURNAL
OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE

are provided. Opposite is a Building for Idiots, established 1855 by philanthropists, with accommodations for 500.

The *Arsenal of War*, also in this quarter of the city, may be reached by cars coming down Callao and Entre Rios, though located on Pozos between Garay and Brazil. Everything needful for the making or repairing of war material, for the furnishing of barracks and most of the military establishments, is here provided. The workshops will interest many, and the depot of war supplies. The buildings, lighted by electricity, are surrounded by large and well planted gardens. There is a gallery for artillery practice. If passing along the Ave. Callao, at 540 the school building *Sarmiento* should be noticed, admirable both without and within.

The splendid *Docks of Buenos Aires* deserve the attention of every visitor. Although now utterly inadequate for the requirements of the city's commerce they are models as far as they go. When constructed it was supposed that they would provide ample accommodations for many years, as no one looked forward to the astonishingly rapid growth of both city and commerce. The port has two sections, the original and natural harbor at the Riachuelo south of the city, where the stream so called, entering the River, allows ships drawing 18 feet only to go some distance up. The docks on both sides of this stream form a very important auxiliary to the more modern section on the River, the tonnage some years ago reaching 1,200,000 annually.

The chief port constructed on the bank of the great River is composed of two large basins called the north and south *darsenas*, and between these, four docks. The *Darsena Sud* is more than half a mile long and 500 feet wide, the first and second docks are about 1800 by 500 feet, the other two a little smaller. The *Darsena Nord* has an area of a million square feet. In the basins the depth of water is 21 feet, in the docks 23.9 at the lowest. The entire water surface of this port is over 150 acres. The Riachuelo has but two sheds for merchandise; this, the Capital port, has 24 depots, 8 of iron and 16 of masonry. Their dock frontage is 8000 feet, their capacity over 2 million cubic feet. There is hydraulic motive power, four motors, 36 elevators, and all other necessities, including nearly 50 miles of railway.

Two large grain elevators at Docks 2 and 3 belong to private companies, one with a capacity for 85,000 tons of grain. Next to these is a mill for making flour, the Rio de la Plata, which cost \$15,000,000. The port is lighted by electricity, 180 lamps of 280 watts, and 261 of 400 watts placed 100 feet apart, so that ships can come in by night as well as by day. It is said to be the best lighted harbor in the world, except that of London. New York is far behind. The cost of the harbor works was approximately \$35,000,000. Plans are already made for vastly greater facilities extending for miles up the river.

The neatness and cleanliness of the docks and their approaches will probably excite the greatest astonishment, and the manner in which they are shut off from the rest of the city by the beautiful Parque de Julio and the Paseo Colon. Between these and the river is an immensely broad, well paved street with appropriate structures and ample room for all traffic. A call to see the Immigrants' Hotel, where fine accommodations for the use of the immigrants are provided in several large buildings close to the Darsena Nord, is well worth while.

An excursion by no means to be omitted is that to *El Tigre*, the fashionable summer and boating resort, where regattas at times occur and where all kinds of water craft are in evidence. It is a short rail or boat ride, an hour or so, to the delightful spot where the river Tigre flows into La Plata. The former is overspread with a perfect network of islands covered with trees, gardens, meadows, and charming vine-clad cottages. On the main shore are pretty hotels and restaurants with music and other attractions, people in outing flannels and in evening dress, a delightful combination of wealth, fashion, and natural beauty, which every one may enjoy.

An excursion should be made from Buenos Aires to La Plata; according to one's taste and pocketbook, to Mar del Plata. A visit to an *estancia* will be greatly enjoyed if permission can be obtained from the proprietor; but the large ones near the city are few in number and obviously it would be inconvenient for them to entertain all passing travelers. With friends at court, the few may be able to arrange a visit.



ON THE RIVER TIGRE



LEGISLATIVE BUILDING, LA PLATA

At *estancias* far out on the *campo* it is different, and the rare stranger is pretty sure to receive a welcome.

La Plata. The excursion requires a full long day. The journey is made by rail from the fine large station on the Plaza Constitución, by the Southern Railway, the F. C. S. The first important station is *Quilmes*, 9 km., a historic spot, taking its name from an Indian tribe which was conquered and deported in 1670. Here landed, June 25, 1806, the English General Beresford with 2000 soldiers for the capture of Buenos Aires, meeting with temporary success; and off shore Feb. 24, 1827, Admiral Brown defeated the Brazilian squadron during a war for the possession of Uruguay. A pretty Gothic church may be seen from the station. On the edge of the town is a vineyard, a brewery also. So far come electric cars, starting from a bridge over the Riachuelo in the part of the city called Barracas. From the station *Pereyra*, 39 kilometers, a branch road goes to the port of *Ensenada*, and in this vicinity are several large *estancias*, the San Juan, the *Pereyra*, and the *Estancia Grande*. Fifty-seven kilometers southeast of Buenos Aires and five from Ensenada is *La Plata*, a city made to order, like Washington, to be the capital, not of the Republic, but of the Province, we should say State, of Buenos Aires, after the city, B. A., had been made the Federal Capital. The decree was promulgated Nov. 19, 1882. The city is well planned with rectangular blocks, but with the addition of many diagonal boulevards, of parks and plazas. On account of the wonderful growth of Buenos Aires, so near, the development of La Plata has not equaled expectations, as for many years was the case with our own capital, Washington; but in time, like that, it will become a splendid city. The chief points worthy of observation are the various Government Buildings, the *Casa de Gobierno*, residence and offices of the Governor, the *Legislative Hall*, the *City Building* (Municipalidad), the *Dirección de Escuelas*, the *Department of Engineers*, the great *University Buildings*, the *Astronomical Observatory* founded by the Government in 1883, and most famous of all, the *Museum*. A carriage may be hired at the station at one *peso* an hour, or a tramcar will make a considerable circuit, fare 10 *centavos*. A large *Asylum for Mendicants*, satis-

fying an important social necessity, has been erected by the philanthropist, Placide Martin.

The *La Plata Museum* (open fête days including Sundays from 1 to 4), having a world wide reputation for its large collection, anthropological and ethnological, was founded Sept. 17, 1884, by Francisco P. Moreno. While the departments mentioned are the most famous, the museum also contains sections devoted to zoology, geology and mineralogy, and to archæology. The substantial architecture of the building and the arrangement of the interior and of the specimens is equal to that of European collections. Unscientific persons will be interested in many of the objects presented, the stuffed animals, the skeletons of prehistoric creatures, the mummies, the pottery, and other objects.

Mar del Plata, called the Newport of South America, is an extremely expensive and fashionable seaside resort about 250 miles from Buenos Aires. The night trains with Pullman cars are well patronized. In the summer season tickets must be procured in advance and rooms engaged at the hotels. The *Hotel Bristol*, American plan, 12 pesos up, is the most luxurious, equipped with every possible convenience. The *Grand, Victoria, Royal* and many others are very comfortable.

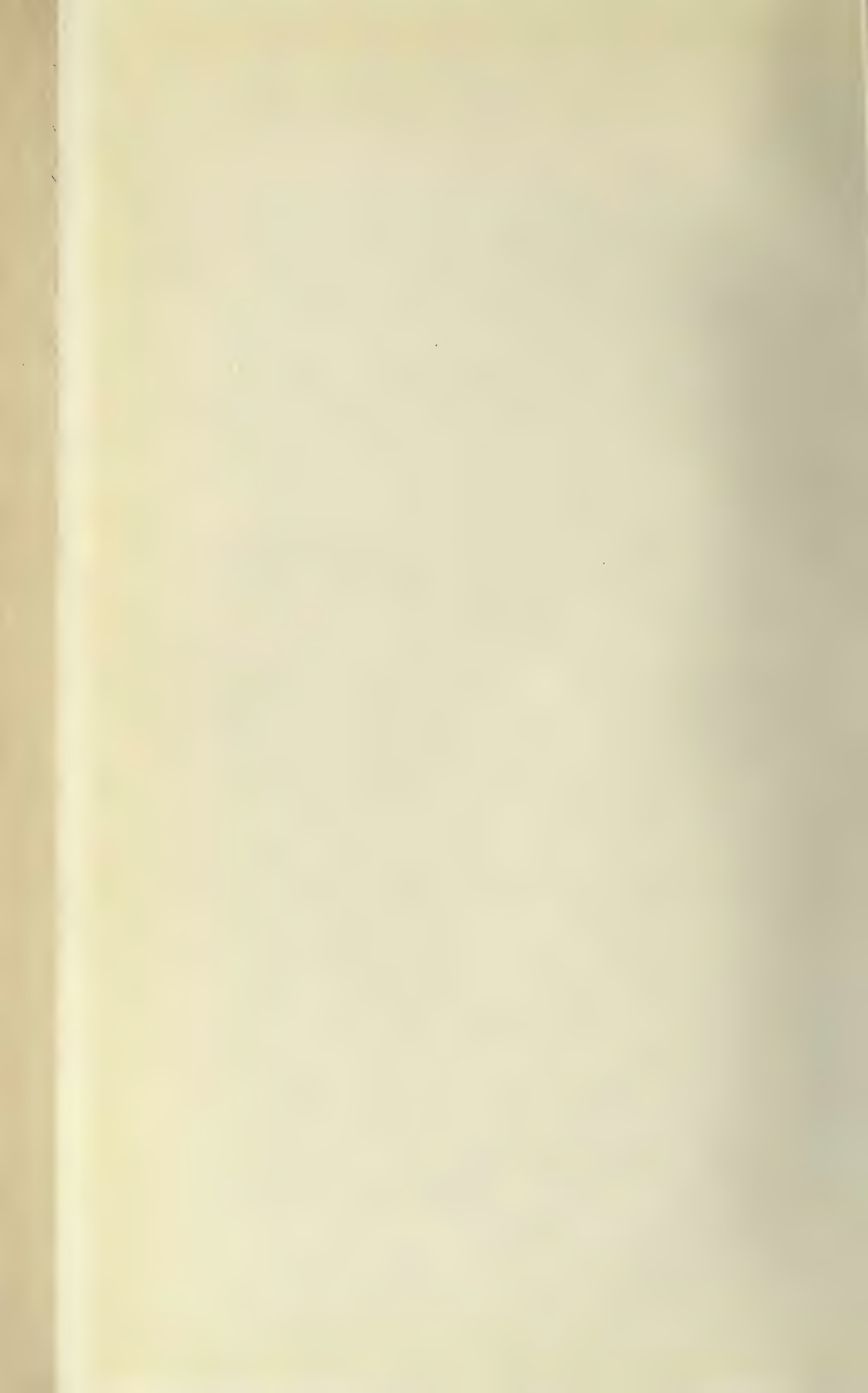
The city has more than 10,000 inhabitants, with boulevards, plazas, splendid chalets and "cottages" of the Newport fashion. There are casinos, theaters, golf course, bathing establishments, and everything requisite for a resort of wealth and fashion on the grandest scale.



UNIVERSITY BUILDING, LA PLATA



MUSEUM, LA PLATA



CHAPTER XXV

THE IGUASSU FALLS AND PARAGUAY

IMPORTANT ARGENTINE CITIES

AMONG the nations of the ancient or the modern world, not one do we know with a history in some respects so extraordinary as that of Paraguay. Yet of the thousands annually who will soon be making the South American Tour, scarcely one would be tempted by *historic interest* to journey 1000 miles from the beaten track. But *the greatest waterfall in the world!* Ah, that is another matter! A waterfall bigger than Niagara, as high and with more water? Truly, that is the tale! So while the majority, who wish to make the trip in three months or so, or who have come in the wrong season, may go directly on from Buenos Aires to Montevideo, some will decide to visit the Iguassú Falls, and then, being near, will cross over to Asunción, the capital of Paraguay.

To a few it would be pleasant to make the entire journey upward in the fine steamers of Mihanovich. Although the banks of the wide Paraná are too distant and too flat to afford much scenic beauty, there is some interest in calling at various cities along the way, and in noting the gradual change from a temperate to a tropical clime, with the variation in verdure and animal life, especially of birds; higher up between narrowing shores or islands are fascinating stretches of forest, interspersed with pretty pastoral scenes. All the way to Asunción, a week's journey, one may sail in the same commodious steamer; but if first visiting the Falls, a change will be made at Corrientes; for the Alto Paraná on which Posadas is situated is more shallow than the Paraguay on whose bank is Asunción.

The shorter way, appealing to the greater number, is to go by rail to Posadas, thence by steamer to the Falls and return, continuing by rail from Posadas to Asunción. The river

route, obviously shorter coming down, may be taken for the return to Buenos Aires, or the rail route through Posadas.

The cross-country ride through the provinces of Entre Rios and Corrientes on the way to Posadas will give a view of the fertile pampas and their rich agricultural products, of enormous herds of cattle, and of the wooded banks of the Uruguay; through Misiones, of a pretty rolling country. The towns are generally small. At last accounts a day and a half was required for the journey.

Posadas, capital of the territory Misiones, is a thriving town of 10,000 inhabitants, destined to more rapid growth, now that it has through railway connection with Buenos Aires, and, after crossing the Paraná, with Asunción; the whole section will share in the prosperity promoted by better transportation facilities. The three hotels of Posadas, one of which, terms, \$2.00 a day, is called fairly comfortable, will be sure to improve. There is a fine Government Building on the principal plaza and other public edifices, a beautiful promenade with native and exotic trees. The river is here about a mile and a quarter in width.

Iguassú Falls. To visit the Iguassú Falls one sails from Posadas in a boat of moderate size 100 miles up the Paraná to the mouth of the Iguassú, and half a mile up that stream to Port Aguirre, where a building, called a hut, serves as hotel, store, and post office. As the Alto Paraná separates Argentina from Paraguay, the Iguassú separates it from Brazil, flowing from the east, from its source in the mountains near the Atlantic. Twelve miles more one proceeds on mule or horseback, a four hours' ride. By 1915, so rapidly are improvements made, doubtless there will be an automobile traveling a good road; and a primitive establishment on the edge of a rocky gorge will have been transformed for the globe trotters into a large hotel with luxurious accommodations. Perhaps, however, the tourist who arrives before the pristine beauty of the wild surroundings are converted into artificial adornment may enjoy equally well the magnificence of the spectacle. From the inn near the Falls, a public spirited and wealthy lady of Argentina has had a roadway constructed, 65 feet wide, more than half a mile along the bank of the stream to the top of the Argentine Fall.

For the river, here a mile and a half in width, double that of Niagara, also has two falls, the Brazilian farther up nearer the other shore. In the midst of this primeval tropical forest, the roar of the great cataract is startling; on the other hand it may seem still more startling to approach through an absolutely silent forest quite to the edge of this tremendous cataract, the wind sometimes unaccountably carrying the noise in an opposite direction. Above the Falls the river is very wide; taking a sharp turn it makes three leaps, the last about 200 feet, where unequal erosion has given something of a horseshoe shape. Zigzag paths cut in the cliff lead down to several beautiful view-points. When the stream is low, it may be crossed above the Falls by canoe and wading, to a point called the Garganta del Diablo, the Throat of the Devil, close to the Brazilian Falls; the traveler with steady nerves leaning over the precipice, in the midst of howling waters and showers of spray, may there have a glorious view of the foaming abyss beneath. In low water the Brazilian and Argentine Falls each measure a quarter of a mile along the edge. Separated by masses of rock in some places covered with forest, they are then quite distinct; but when the river is high they are practically one, the whole measuring nearly two miles across, indeed a worthy rival of Niagara, as figures show, in the midst of wild and delightful scenery.

Comparing this with the other two great cataracts of the world, Victoria and Niagara, the African fall leads in height with a leap from 210 to 360 feet, that of the Iguassú is 196-210 feet, and Niagara but 150-164. The width of the Victoria is slightly more than Niagara's; the Iguassú with its 13,123 feet has more than double the breadth. In the volume of water also the Iguassú is greater with 28 million cubic feet a minute to 18 million for each of the others. Our great Niagara thus seems outdone by both, while in the magical beauty of the surroundings there is no comparison. The Argentine Government is already awake to the necessity of preserving from spoliation by the greedy and destructive hands of men this one of the world's marvels for the admiration and enjoyment of posterity, and is planning for the development here of a great National Park, foreseeing that vis-

itors will come from all parts of Europe and America when aware of the attractions and that the comforts of travel will be supplied.

One having the spirit of the true explorer may continue up the Alto Paraná River, now dividing Paraguay from Brazil, 125 miles farther, to the foaming cataracts of *La Guayra*, sometimes called the Seven Falls and said to be the mightiest on earth. Above these is a great lake from which the water emerging comes down over precipices through a narrow gorge at one point but 250 feet wide. The waters drop in one leap after another 310 feet, descending into the gorge below with a force so tremendous as to form a maelstrom by the side of which the Niagara whirlpool is a quiet spot. They are calculated all together to have a force of 4.3 million horsepower, from a mass of 13,000,000 cubic feet a minute. Four hundred miles farther up stream are the Uberaponga Falls.

Ruins. One who delights in these will find a further attraction in the territory of *Misiones*. Not so ancient as the Inca and other remains in Peru and Bolivia, they still have an interesting history. Here in Misiones, and in neighboring regions of Brazil, occurred the earliest and most successful attempt yet made for the civilization of native tribes, instead of their extermination or exploitation, ruthlessly practiced for centuries in most parts of North and South America. The earliest settlements of the Indians made by the Jesuits were in the countries of Paraguay and Brazil; but as a result of the attacks of the Portuguese, who carried the Indians off into slavery, the Jesuits migrated to the south shores of the Alto Paraná and to the region along the Uruguay, taking with them their protégés, who through humane treatment had become submissive to their influence. Thirty villages were ultimately established, which in 1732 were in a prosperous condition with 30,362 families. Envy thus arose from which and other reasons the Jesuits were expelled from the colonies as also from Spain in 1768. Bereft of their leaders the Indians, happily domesticated and employed, soon began to scatter, and in 1817 the villages were destroyed. The ruins of these large establishments, surrounded and overgrown by

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A FRACTION OF THE IGUASSÚ FALLS

THE
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MUSEUM OF
NATURAL HISTORY

thick woods, are mute, impressive witnesses of the criminal folly of man and of the destructive power of nature.

Such ruins exist at *Apostoles*, a railway station 35 miles from Posadas, though the best preserved are at San Ignacio Mini, 11 miles from Santa Ana, $1\frac{1}{2}$ miles from the bank of the Paraná.

HISTORICAL

Before crossing the river into Paraguay, a glance at its strange history is in order. Wonderful indeed it appears, that almost in the center of this great continent, eight hundred miles from the sea, a city was founded August 15, 1536, by three hundred Spaniards, a full century before Roger Williams made a settlement on the shores of Narragansett Bay and seventy-one years prior to the first English colony established in North America. The names of Juan de Ayolas and his faithful aid, Captain Martinez de Irala, should stand out more prominently in the list of American pioneers. A land route to the newly discovered rich gold country of Peru was what they were seeking. With this end in view Ayolas established a fortified settlement on the site of Asunción; then having made peace with the Indians he pursued his way north and west in the hope of winning through to Peru. For this purpose he had been sent by Pedro de Mendoza, after that leader had established a small colony at Buenos Aires. Sailing up the river to a natural port which he called La Candelaria, he left here the ships with Irala and forty men, with orders to wait for him four months. Then he plunged into the vast and gloomy forest.

Somewhat later the Governor of Buenos Aires, Francisco Ruiz Galen, hearing of Ayolas' disappearance, with six ships and two hundred men, sailed up to Asunción, arriving about when Irala for the second time returned from La Candelaria for necessary supplies. Galen, asserting authority, refused Irala a vessel to go back. Months elapsed before the faithful Irala with angry urging at length obtained the vessel. It was now the autumn of 1538, long after the time set for Ayolas' return. Still Irala waited, ignorant that Ayolas and all his followers were lying dead in the forest not far distant. For while Irala had been urging his demand for the vessel and supplies, Ayolas, who had journeyed among hostile Indians, swamps, and forests to the mountains of Charcas, had returned unscathed with gold and silver to find the banks of the river deserted and no vessel in waiting. The tragedy was complete when the Indians fell upon the little band and slaughtered every one.

Again Irala descended to Asunción and again returned to wait, till at last he learned from the Indians of the unhappy fate of his chief and sadly went back to Asunción. There he was enthusiastically acclaimed Governor and Captain-General of the colony.

Although his subsequent career was far from smooth he was more fortunate, as well as more faithful and able, than most of the *conquistadores*, at last, while still in office, dying peacefully, in 1557, at the age of seventy. Years of jealousy and strife followed. Meanwhile the settlement at Buenos Aires had been abandoned. Though re-established in 1580, Asunción remained the chief Spanish city on the eastern slope of South America until near the close of the eighteenth century. When, however, in 1776 a Viceroy was appointed for the region of La Plata, he had his seat in Buenos Aires. Some time after the revolution there of May 25, 1810, a small army was sent from Buenos Aires to Paraguay with the expectation that they too would revolt. Instead, the Argentines were defeated; but a little later the people of Paraguay demanded the resignation of Governor Velazco. It was given and a new government was peacefully organized, to be followed by many changes, until in 1844 Carlos Antonio Lopez was elected President. This office he held until his death in 1862 when he was succeeded by his son, Francisco, both men being really dictators. Unfortunately the son, who had visited Europe, conceived the idea of becoming a second Napoleon, and at once began to strengthen and discipline the army and to fortify the country. Uruguay, as usual involved in difficulties, appealed to Lopez for assistance against Brazil. Lopez, on his way to invade that country crossed Argentine territory although permission had been refused. Uruguay meanwhile becoming reconciled with Brazil, Paraguay became involved in a war against these three countries. Presumably, a war between one small country and the two greatest of South America would be of short duration. Not so! Six years the war continued, inflicting upon the little country, through slaughter and disease, loss and suffering unparalleled, costing the allies also severe distress. No more heroic struggle is recorded in history. Though with a splendid army of fighters, the resources of Paraguay gradually diminished, a victory winning no lasting good. A chain barrier fixed across the river, with fortifications, long kept the enemy out. Wooden cannon were constructed from the hardwood of the forest; but at last the forts were passed. In December, 1868, after a severe defeat, Lopez abandoned Asunción to continue his struggle in the interior. Defeated in August, 1869, in a last battle, he fled farther into the forest, till finally, March, 1870, his horse becoming mired in a swamp, he was killed by a spear thrust after refusing to surrender.

Freed at last from his ruthless domination the country had peace; but alas! of the population of nearly a million and a half six years earlier, but 280,000 it is said remained. An army decimated is supposed to suffer terrible loss. Here five-sixths of the entire population perished, the cattle and agricultural resources were destroyed. Few able-bodied men had survived; boys even to the age of ten had been impressed into the army; delicate women had been compelled to work in the fields for the production of grain to sustain life, and had suffered many unspeakable hardships. The struggle of the Greeks against the Persians was not so desperate, or prolonged to so bitter an end. This, moreover, was wholly unnecessary, the Dictator Lopez being the culpable aggressor; none the less, this story of the unparalleled heroism of a people should be more familiar to the world outside.

A season of recuperation and freedom followed, but many years were needed for the nation to retrieve in population and resources the position it held before the war. Not yet indeed are the inhabitants so numerous, nor have they learned the advantages of peace. No longer ago than November, 1911, an insurrection broke out, which for six months or more caused devastation and bloodshed. It is to be hoped that peace will now be preserved.

Curiously enough, the people of Paraguay pride themselves upon being the most homogeneous and united of all the South American Republics, as they are among the best fighters. Not that they are of pure Spanish descent! They are an amalgamation of the early Spanish settlers with the Guaranís, the most numerous and intelligent of the Indian tribes in the neighborhood. An illustration of the fallacy of certain theories, the result is a strong and handsome white race, preserving with Spanish culture and virtues the warlike nature of the Guaranís and unusual virility for a people on the edge of the tropics.

From Posadas across the river to Villa Encarnación the through trains are now carried on large ferry boats as planned. The journey to Asunción may therefore be made by through cars from Buenos Aires, the road having recently been widened, and iron bridges erected over the various streams. It is a pretty, rolling country, still sparsely settled, with forests, open grass lands, and occasional small villages and farms.

By River to Asunción. Should one prefer to sail up the river to Asunción and return by land, which on some accounts might be the more pleasurable, one would drive in the early

morning to the docks of the Darsena Sud, whence the great steamers of the Mihanovich Lines ply to Montevideo and to the north. Also there are boats of the Lloyd Brasileiro twice a month. Excellent steamers provide every essential comfort, and the person for whom the sea is too boisterous may find pleasure in this experience. Unless with a considerable party one should be something of a linguist to enjoy fully the excursion, as the crowd will be cosmopolitan, representing perhaps a dozen different countries.

A multitude of vessels will be passed ere the ship sails freely on the great brown stream, so like the sea except in color. It first seems like a river, only on the entrance to the Paraná, where the steamer winds in and out among low islands, fringed with rushes and willows. Several ports are passed on the left bank, but most of the way now, as far as Corrientes, the stream is so wide that only one bank is visible. The water swirls along $2\frac{1}{2}$ knots an hour. There are vistas of green and silver, occasional sails, and gradually higher banks.

Rosario. The first call is made next morning at this, the second city in Argentina, with nearly 200,000 population, founded by Francisco Godoy in 1725, but having small prosperity until, in 1859, General Urquiza made it a port of entry. Ocean steamers drawing 24 feet come to its docks, for as a grain port it leads Buenos Aires. The city is situated on bluffs, one says 60, another, 300 feet high. An expensive system of docks has been arranged to suit the varying height of the river. Sacks of grain are sent down through chutes into the holds of the vessels. The river here is said to be 20 miles wide, though with numerous islands it does not so appear.

Rosario is a great railway center, roads leading to Mendoza and the Trans-Andine, to Bolivia, of course to the Capital and to other cities; it is expected that a road soon will extend to the Amazon basin. Rosario compares with Buenos Aires somewhat as Chicago with New York; it may have a similar if less rapid development. On higher land, with wider streets than Buenos Aires, in other respects it is naturally inferior. There are several hotels, the Grand, Central, Royal, Britannia, and Frascati called comfortable, with prices more moderate, as they should be; the new Victoria Restaurant is



JUDICIARY BUILDING, ROSARIO



RESIDENCE ON AN ARGENTINE ESTANCIA

good enough for any one. There are excellent public buildings, especially a magnificent Custom House, the Palace of Justice, a busy Bolsa (Exchange) on calle Córdoba, a handsome street with good shops; a beautiful park, boulevards, and fine dwellings. Electric cars supply adequate service. There are many English here, who have a pleasant Club; also there is a Strangers' Club.

Paraná. Above Rosario a call on the other side is made at *Diamante*, then one at Paraná, capital of the Entre Rios Province, a pleasant town of 30,000, founded in 1730 by a colony from Santa Fé. On the Plaza de Mayo is an imposing Government Building, and a Cathedral whose twin white towers are seen afar. The Plaza Alvear near the river is more beautiful, with graceful palms and flowering trees, above which rise the towers of a fine church, the San Miguel. The Paseo Rivadavia, a broad, shaded promenade, conducts to the Urquiza Gardens. Here broad walks and stone stairways, among blossoming shrubs and flowers, and handsome trees, lead down to the river or to the top of gentle slopes, which afford a panorama of the winding river and of a broad expanse of rolling country, especially admirable after the flat plain. A large new theater offers entertainment. We have doubtless all heard that "If wishes were horses, beggars might ride," and in Paraná they really do. The city has electric cars, the workshops of the Entre Rios railway, and is a distributing and shipping point of importance, also an educational center. One interested in this phase of Argentine life may visit the School Alberdi, seven miles distant, a Normal College of Agriculture, the only one in the Republic. It aims to furnish all the learning necessary for rural managers, the knowledge requisite for the administration of an *estancia*, both for cattle raising and agriculture, to give information as to suitable exploitation of especial sites, and, besides furnishing technical knowledge, to develop initiative, perseverance, and ability for direction and organization. The estate covers 1000 acres, cultivating wheat, flax, corn, oats, alfalfa, potatoes, besides 5000 trees of choice varieties.

Santa Fé. Opposite Paraná is *Colastine*, the port of *Santa Fé*, the former for ocean vessels, smaller river steamers only sailing up the tributary, Quiloaza, to the capital city, seven

years older than Buenos Aires. This also was founded by Juan de Garay, a short distance from the larger river, as in those days of smaller vessels a quieter port was desirable than the unruly Paraná. Once a rival of Rosario, it has now with a population of 50,000 been left far in the rear.

One of the public buildings, the Casa de Senadores, is a historic place where in troublous times five National conventions have been held, 1828-31-53-60-66; many provincial assemblies have met here for constitutional reforms of the Province. From the lofty tower there is a fine view of the city and surrounding country. Among other important buildings are schools, a Public Asylum, and several churches, the Metropolitan erected 1741 originally with a single nave, two being added in 1834. Some historic relics within are four splendid marble basins for holy water, gift of the Tyrant Rosas, a chasuble of richly embroidered satin made at Misiones about the middle of the last century, a painting from Cuzco, of date 1751, representing the beheading of Saint Firmin, a Christ sculptured in relief on a block of fine white marble framed in Corinthian bronze, and a portrait of Saint Peter. The Church of St. Domingo, corner 3rd of February and 9th of July, commenced in 1786, now entirely renewed, contains a silver tabernacle with Byzantine design, a diadem of the patriarch Santo Domingo, and other valuable relics. San Francisco Church, Comercio and Ecuador streets, begun in 1652, completed 1680, has relics of the noted general, Stanislas Lopez, who is buried under the cupola, and a remarkable Jesus of Nazareth. La Merced, on Comercio and Gen. Lopez streets, built in 1728, contains a fine oil painting of the Virgin. The Cathedral now in construction, in the form of a Latin cross, will be a monumental work. A statue of San Martin, like the one in B. A., adorns the plaza of his name, the pedestal representing a condor, the symbol of strength and of the victories of the great General contributing to the Independence. A municipal theater which cost \$125,000 has a handsomely decorated foyer. The hotels, Grand, Central, etc., are all rather poor.

Higher up the Paraná, towns are more scattered but calls are more frequent. *Santa Elena* is a town with a large *saladero*, a meat-curing factory. At *La Paz* wood and char-

coal are an important element of trade. The scenery becomes more pleasing. A severe thunderstorm may afford temporary excitement. Crude native boats floating down stream are met, bamboo laden schooners, rafts of quebracho timber. These, too heavy to float, are supported by common wood placed beneath. The ports *Bella Vista* and *Piraguacito* are centers of the quebracho industry. This remarkable wood, the name meaning hatchet-breaker, one of the hardest known species, is largely used for railway ties throughout South America, and to some extent for furniture. From the red colored variety tannin is extracted, so valuable in the tanning of hides. This was first effected in France in 1874. In 1889 the first factory for tannin manufacture was erected at Puerto Casado, Paraguay, the country where it is most largely produced.

Corrientes, founded April 3, 1588, with 25,000 population, is an important and busy place, exporting rich woods for building and cabinet making, sugar, cotton, and tobacco, horses, sheep, and cattle. The city, three days from Buenos Aires, is 25 miles from the junction of the two great rivers, the Alto Paraná and the Paraguay, and from the frontier. To visit by this route Posadas and the Iguassú Falls one would here change to a boat of lighter draft, as rapids below Posadas allow passage in the dry season of steamers drawing no more than three feet.

To Asunción one continues in the same steamer, as the Paraguay River, though considerably narrower, permits steamers of 12 feet draft up to that city. Floating islands are frequent, orchids and parrots are numerous; alligators in profusion bask in the sun, disdaining to move at the occasional crack of a rifle aimed in their direction. Islands of green with flowers of lavender float upon the stream. Blossoms of purple and of white depend from the creepers which embrace the trees of the forest. Giant scarlet flowers a foot in diameter spring from a green cactus. Human life is rare.

The first halt in Paraguay, now on the right bank, while Argentina continues on the left, is *Humaytá* where the familiar colors red, white, and blue, appear instead of the Argentine blue and white only. This being a garrison town, low barracks are visible and soldiers in khaki. A conspicuous

object is a great red brick church, battered and rent from top to bottom, a mute and mournful witness of that strange six years' war. Attacked by the allies, the defensive army under Col. Martinez made long and suitable resistance, at length retreating to the church which was bombarded from the boats. Surrender was at last compelled. Lopez at this was so enraged that, as Martinez was not at hand, he seized his wife and dragged her along with his army. After suffering frightful tortures, her hair mostly torn from her head, she suffered death from merciful bullets. That she was a relative of Lopez was nothing to the monster of cruelty who caused a brother to be shot and his own mother to be flogged.

The country on the left with low banks is called the *Chaco*, first the Argentine, and above Asunción the Paraguayan; it is a wonderful section many times traversed, but not yet thoroughly explored; with the region to the north one of the least known parts of the earth. From the highlands of Bolivia at the northwest the slope is extremely gradual causing many swamps. With some poor land there is more with rich vegetation, immense forests, wild animals of many kinds, including boa constrictors. And there is a tale of a creature called Mboya Jagwa, dog snake, a water serpent unknown to science, 60 or 70 feet long with a head like a dog and a hooked tail. The Indians all agree in their description of it, and one village moved to another part of the country because one of these creatures had settled near by.

Two days have passed on the clearer waters of the Paraguay when a strange sight appears in this alluvial land; some large stone buildings and great boulders of red stone along the bank, then a rocky sugar loaf mountain, not very high, a mere babe of a mountain, but a pleasing sight in this flat land. A different country is here; red cliffs, honeycombed with caves, rise from the shore. One more corner, and the city of Asunción appears, after so much wilderness, an imposing display of white walls, roofs and spires, facing not only the stream up which we have sailed, but the broad Pilcomayo, flowing in from the northwest, which marks on that side the boundary between Argentina and Paraguay.

Asunción, capital of Paraguay, is called by one English writer the cleanest, nicest town on the river above Buenos



GOVERNMENT PALACE, ASUNCIÓN

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Aires. Situated on a hillside above the stream, it has fine natural drainage; and good air and sunshine make it a healthy place, to which many come from the south to recover from tuberculosis. A thousand miles from the sea it is only 203 feet above the ocean's level. With a population of 80,000 it is still a quiet, sleepy town; for several hours at noon in summer the streets are practically deserted. The Gran Hotel del Paraguay is supplied with baths, has French cooking, and English is spoken. A Paraguayan *peso* is said to be worth 8 cents gold, so it may be well not to have too many.

On the main Plaza, of course, is the *Government Palace*, which was built by Lopez just before the war and is now used for the offices of the President and the Members of his Cabinet; the second story windows afford a splendid view; here a breeze is ever blowing. The *National Library* deserves a visit, for it contains the finest existing collection of old Spanish documents connected with the history of the Plata region, and Jesuit annals from 1534 to 1600; interesting accounts also of what was nearly a condition of State Socialism under Dr. Francia and the elder Lopez. These documents, carried off by the younger Lopez when he abandoned the capital, were for many years in peasants' houses at Piribebuy, where many valuable manuscripts were used as waste paper.

The *Museo de Bellas Artes* boasts of at least one Murillo and half a dozen other paintings which would adorn any European collection; portraits too of many historical personages. The streets, paved with stone and lined with white-washed walls, well reflect the sun; here is repeated the saying that only the English and mad dogs walk on the sunny side of the street, although the climate even in summer is not marked by extreme heat. From Tacumbu, the summit of the ridge above the town, a beautiful view will be had of long stretches of winding river up and down, and leagues over the Chaco forests opposite as well as the rolling country to the east. The forests are not of one or a few kinds of trees. Out of a number of 163, in a space 100 yards square, there were 47 (not 57) varieties. The land is well adapted to intensive cultivation, on account of the great variety of products which may be raised. There is good hunting, boar, jaguar, monkeys, red wolf, etc., and a great field for scien-

tists in both vegetable and animal worlds. Also there is a chance for the treasure seeker; for when Lopez fled from the capital he took with him seven cartloads of specie, at least \$5,000,000. One cartload, on account of hot pursuit, was dumped over the bank into a river. The rest was carried on and buried in the midst of a swamp where it was marked by a wooden cross. This cross was burned in a prairie fire, Lopez and all of his men perished, the records were lost; but one man is reported as living who followed the wheel tracks to the end. However, the money obviously belonged to the Government of Paraguay and if found, which is improbable, a good portion at least would have to be forfeited to the Government.

Every one who comes to Asunción will wish to purchase a bit of Nanduty lace, as it is called, a specialty of Paraguayan handiwork, some of it very fine and beautiful. It bears resemblance in patterns to Mexican drawn work; it is not, however, drawn, but is genuine lace. It may be purchased also in Buenos Aires; perhaps sometimes in Montevideo, but none could be found there in 1912 in spite of a strenuous hunt, nor in Rio either. The prices are moderate, and no man need hesitate about purchasing a piece. No woman will.

Another specialty of Paraguay is the *yerba mate*, sometimes called Paraguay tea, which is raised also in neighboring parts of Argentina and Brazil. This herb, *Ilex paraguayensis*, or South American holly, grows as a bush or tree resembling the orange. The leaves, which are bright green, are used to make a tea, in these three countries very popular with natives, and with many immigrants; it is being gradually introduced into Europe. The leaf is smoked and powdered. The beverage is made by putting some of this powder into a small gourd called a *mate*, and pouring on boiling water. After it has steeped a while, flavored with lemon or sugar, it is drunk through a *bombilla*, a tube enlarged at the end to a sort of oval ball, with small holes which admit the liquid, but are supposed to keep out the powdered tea. The natives and others drink this on all occasions. Taken in moderation it is very wholesome, of more or less the same class as tea and coffee, but containing less tannin than either; of caffen or thein it has less than tea but about the same as coffee. It

does not irritate but soothes the nervous system, and is beneficial to the digestion unless used to excess. When used *instead* of food it becomes injurious. Thus a gentleman, Scotch, who had been in the habit of taking 12 or 14 cups in the morning and eating nothing until noon, at length found himself in a bad way. Placed by his doctor on a sensible diet, a good breakfast with only 2 or 3 cups of *mate*, he found his health soon restored. It is estimated that in South America, despite the great coffee production, 10,000,000 persons drink *mate*. It is sold in England, France, Germany, and other countries of Europe, the United States being slowest in learning to appreciate its excellence. In 1909 more than 2 million pounds were produced. Plantations are now being set out and its production and consumption are certain to increase amazingly.

CHAPTER XXVI

URUGUAY

THE country of Uruguay has the distinction of being the youngest, and the smallest in area, of all of the South American Republics. It must not, however, be inferred that it is therefore the most backward. On the contrary, its financial reputation is of the best, its bonds selling in Europe at par and above, while the population to the square mile is greater than that of any other country in South America. Although small, indeed, by the side of its neighbors, Brazil and Argentina, it is twice the size of Portugal and about the same size as New England combined with Maryland; a trifle smaller than the Brazilian State of São Paulo, or than our State of Nebraska.

HISTORY

While the very first landing in the Plata River section was naturally made in this country, Juan Diaz de Solis with fifty of his followers here going ashore in 1515, unfortunately to meet death at the hands of hostile Indians, the permanent settlement of Montevideo was delayed until December 24, 1726. The Charrua Indians inhabiting the country seem to have been a particularly fierce tribe, and several attempts at settlement in various places resulted disastrously. In the seventeenth century, a number of colonies had been established by the Franciscans and Jesuits, including one at Colonia, which site with the country in general, at that time called the Banda Oriental, was long a bone of contention between the Spanish and the Portuguese.

After the *Junta* of Buenos Aires had in 1810 established its rule within its own borders, Montevideo was for a short time the seat of the Spanish Viceroy; but the people of Uruguay soon became eager for independence and under the leadership of Artigas a war was waged for years, sometimes against the Spanish, then against the Portuguese, and even the Porteños of Buenos Aires. After the destruction of the Spanish fleet by Admiral Brown, Montevideo, June 20, 1814, surrendered to the besieging army, and the Spanish power on the River Plata was ended. General Alvear of

Buenos Aires, for a short time in command, presently withdrew leaving the city in the hands of one of Artigas' lieutenants, the General remaining in camp on the Uruguay River. In 1816 the Portuguese from Brazil invaded the country, and Artigas was finally obliged to take refuge in Paraguay.

When in 1824 the power of Spain was finally destroyed on the whole continent, Uruguay alone was destitute of independence. In the midst of rejoicing at Buenos Aires over the victory of Ayacucho, Lavalleja, who had earlier distinguished himself against the Spaniards, and other exiles from Uruguay were moved to free their own country from foreign dominion. It was a small band of thirty-three men, *Treinta y Tres*, now a popular name in Uruguay, that set out from Buenos Aires for the invasion of that country. Having crossed the Uruguay River, they soon obtained forty recruits and after a brief skirmish with the Portuguese forces took the town of Dolores. General Rivera, sent against Lavalleja, forsook the Brazilian service and with his men joined the patriots. Soon the whole of Uruguay was in arms, an independent government was established at Florida. The Portuguese fleet was later defeated by the Argentine Admiral Brown, and a series of victories culminating in the battle of Ituzaingó, which made the expulsion of the Portuguese seem inevitable, incited Lavalleja in October, 1827, to proclaim himself Dictator, though in July, 1828, he voluntarily resigned the office. In August both Argentina and Brazil acknowledged the independence of Uruguay and on May 1, 1829, the national authorities made a formal entry into Montevideo.

After a constitution had been adopted, July 18, 1830, the National Assembly in October elected Rivera, President, to the great disgust of Lavalleja who at once plotted against the government. Rivera, however, twice drove him from the country into Brazil and served his term of four years. The second President was General Oribe, one of the Thirty-three, who combined with Lavalleja against Rivera and, with the assistance of the Argentine Dictator Rosas, defeated him in a battle which was of especial historical importance from the fact that the red and white colors were used to distinguish the forces, ever since emblems of bitter strife as the badges of the two parties called *Colorados*, Reds, and *Blancos*, Whites, the former that of Rivera, the latter of Oribe.

Fighting was almost continuous until the fall of Rosas in 1851. Giro became the fourth President in 1852 but in 1853 revolts began again. The deaths of Rivera and Lavalleja about this time had no effect in promoting peace. Strife continued until in February, 1865, Flores, having obtained the active support of Brazil and entered Montevideo, was made Dictator of the Republic. Then little

Paraguay, previously asked to interfere, jealous of Brazil's power, continued the fight. And Paraguay, with her army of 80,000 men, might have been equal to any *one* of the countries alone. During this war Flores, who was of the Colorado party, was assassinated in Montevideo, a terrible visitation of cholera occurred in 1868, and a financial crisis that ruined thousands in 1869. Troubles were incessant and up to the present time hardly a single President has had an entirely peaceful term. That after this prolonged condition of turbulence, the Republic shows so remarkable a degree of development and prosperity is wonderful indeed.

As to the country in general, it may be said that while it possesses no striking features such as lofty mountains or great waterfalls, it is a beautifully diversified region, with no flat or desert land, but with low ridges, valleys, and rolling plains, in some parts well wooded. It is admirably adapted for grazing and agricultural products. The climate is healthful and delightful, the population, numbering about 1,300,000, is more homogeneous than in most of the Republics, and forms an enterprising and progressive nation.

MONTEVIDEO

HOTELS. *Pyramides*, Sarandí corner Ituzaingó; *Grand Hotel Lanatta*, Sarandí 325; *Central*, 25 de Mayo, 245; *Oriental*, Solís, corner Piedras; *Palacio*, Calle Florida; *Globe*, 25 de Agosto and Colón. In the suburbs, *Parque Urbano*, and *Pocitos*.

Excellent electric cars and service. Fare in center of the city, 4 cents, farther out 6, 8, 10, and to Colón, 14 cts. *Carriage fare* \$1.00 or \$1.50 an hour. *Post Office*, Sarandí 207. Postage, letters to United States or Europe, 8 cents; cards, 2 cents.

Uruguay dollars, *pesos*, are worth a little more than the American; \$10.00 United States currency equals \$9.66 Uruguay. Or \$1.00 Uruguay equals about \$1.04 of our money.

The office of the United States Minister is on the 18 de Julio, 221, that of the American Consul in Treinta y Tres, 53. The British Legation is at 445, 25 de Mayo, the Consulate at 20 Paraná.

On landing at Montevideo a carriage may be taken to the hotel preferred, or decision reserved until they have been inspected. No one in the center of the city is pre-eminent but several will be found satisfactory except to the hyper-critical. First may be mentioned the *Pyramides Hotel* on Sarandí at

the corner of Ituzaingó, near the Plaza Constitución, highly spoken of. Well known is the *Grand Hotel Lanatta* facing the same plaza; the *Oriental Hotel*, the *Central*, the *Globe*, the *Florida*, are all available, close to the center of the city.

A clean, homelike, and agreeable city is Montivideo, most attractive as a place of residence, and preferred by many to the great metropolis farther up the river, with its million more inhabitants. About the size of our own capital, Washington, it is large enough for all practical purposes, and is the home of a wide-awake community. Several days should be devoted to the various objects of interest, which include parks, suburban and seaside resorts of great beauty and elegance.

Sight-seeing may be commenced with a stroll in the center of the city, after which excursions by car or carriage will be in order. As in Buenos Aires, the cars are conveniently numbered, which renders the service especially valuable to strangers.

Plaza Constitución, sometimes called the *Matríz*, is a good place to begin. Of the twelve large plazas, this, with several others, has a pretty garden occupying the center. On the east side is the *Cabildo*, a quaint old building now used for the Legislative Assemblies, the only building of historic importance in the city, which is practically all new. Opposite is the *Cathedral* with towers 133 feet high. To the handsome interior, paintings and other decorations have recently been added, and there is a sweet-toned organ. On the south side next to the Lanatta Hotel is the *Uruguay Club*, which is handsomely housed, its imposing salon for receptions and balls the occasional rendezvous of the *élite* of the city. On the north side of the plaza is the home of the *English Club*.

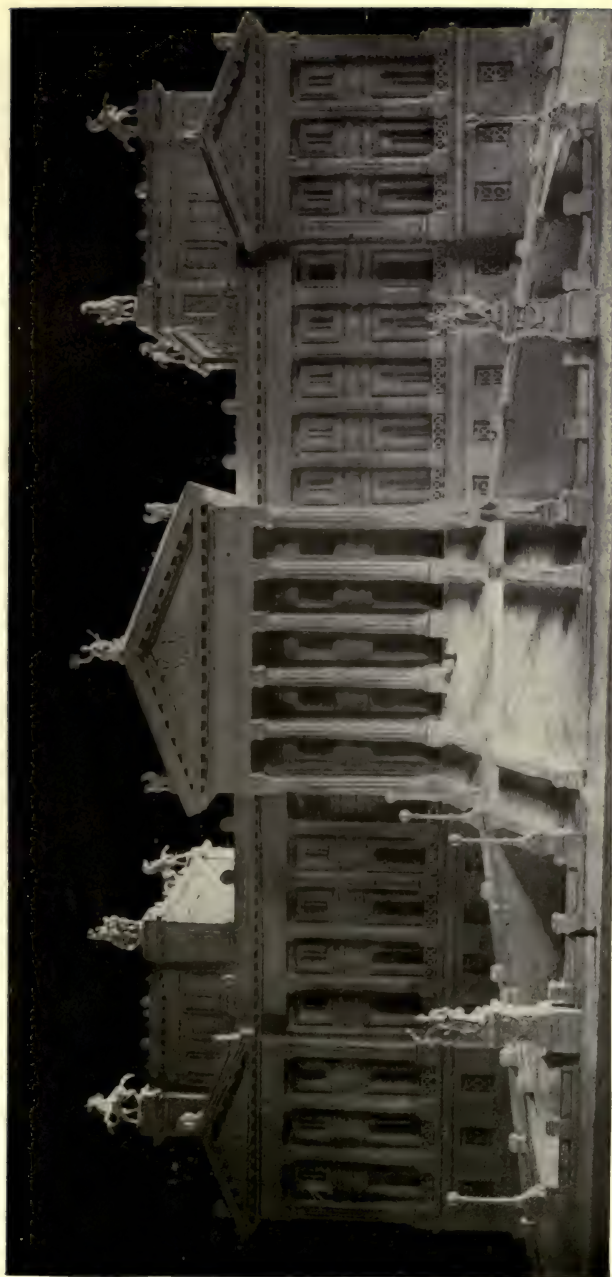
On the *Plaza Independencia* not far away, reached by the calle Sarandí, is the Government Palace containing the offices of the President and Ministers, presently to be superseded by a splendid structure on the principal avenue, 18 de Julio. Just off the corner of this plaza is the *Solis Theater*, with a handsome Ionic front, a rather ancient building for Montevideo, more than fifty years old, its right wing housing the Museum. The theater which has recently been remodeled, now seating over 3000, is one of the fine establishments of South America, though rivaled in Montevideo by the newer

theater Urquiza, corner of Andes and Mercedes, which was inaugurated by Bernhardt in 1905. In one or the other of these have appeared nearly all of the most noted European artists, at least of the Latin races, stars of the drama and of the opera both. The people are great lovers of the theater and more than 2000 performances are given in a single year with about two million spectators.

The *Museum* includes a considerable collection of specimens of the natural history and geology of the country; many relics of the native Indian tribes now altogether extinct, such as hundreds of stone bolos and other weapons, with primitive utensils; souvenirs of the colonial wars, and some paintings by artists of Uruguay and Europe.

The new *Legislative Palace* on the Avenida Agraciada is a magnificent building with two fine plazas in the front and the rear, and space on all sides. The basement will contain fire-proof chambers for the archives, and rooms for lighting, heat, and service. The ground floor has a great vestibule and a corridor 55 feet wide extending to the rear of the building, crossed by three others 10 or 12 feet wide. Near the entrance are quarters for the guard of honor, and farther in are rooms for police, telephone and telegraph, wardrobes, and other purposes. On the front a great marble staircase 55 feet wide leads up from the ground to the entrance on the main floor. Pedestals with costly bronze statues are designed to divide the staircase into three sections. Two ramps, one on each side of the stairway, permit the ascent of vehicles to the main entrance in front of a large hall, Pasos Perdidos, 55 feet wide and 160 long, embellished with columns, and with a staircase leading to the floor above. The two large chambers for the Senate and the Representatives, one on each side, are 66 feet in diameter and two stories in height, with galleries for the Press and the public. In the front of the building are salons for the President and the Ministers, with private rooms, and at the sides and back are rooms for the officials of Congress. The design was one of the Argentine architect, Meano, modified to suit local taste and conditions. The building, which was to cost \$2,000,000, is expected to be complete in 1914.

Other interesting buildings are those of the *University*, the *School of Arts and Trades*, and the *Agricultural Institute*.



NEW LEGISLATIVE PALACE, MONTEVIDEO

There are two groups of new University buildings, erected at a cost of \$2,000,000; the one on the Ave. 18 de Julio containing the central offices of administration with the *Schools of Law and Commerce*, the other, the several buildings containing the Medical School, the Chemistry Building, and housings for the Institute of Hygiene, Physiology, etc. The *Administration Building* occupies an entire block between Caigna and Yaro, where formerly was the School of Arts and Trades. Of classical Italian architecture, with two stories and a high basement, it contains ten class rooms seating from 50 to 100 each, two halls seating 200, and one accommodating 800. There is a law library of 30,000 volumes, one of the best in South America, while for the present the *National Library* also is in the building. The large *high school* occupies a handsome structure covering most of the block south, facing on Lavalleja. It is well fitted up with laboratories, gymnasium with baths and rest room, class rooms light and airy, and with all modern scholarly and hygienic equipment.

The *Medical School* occupies the block formerly the Plaza Sarandí, being surrounded by the streets Uruguayana, Ladislao Terra, Yatay and Marelino Sosa, not far from the new Congressional Palace. There are three separate buildings which are arranged and fitted up in a style which would meet the demands of such an institution anywhere. The central part of the main building is occupied by the various offices, council chamber, library, and reading room, a hall seating 1000, etc.; one wing is devoted to the Institute of Physiology, the other to that of Anatomy. The *Department of Chemistry* has a fine building on Ladislao Terra and Yatay, the *Department of Hygiene*, one on Ladislao Terra and Uruguayana.

Other Schools which might be connected with the University but which have a distinct organization are the Agricultural and the *Veterinary*. The latter is a little farther out on one of the principal avenues of the outer city, the Larrañaga, with grounds covering 30 acres. It will ultimately include a number of buildings for the various departments, Laboratories, Clinics, Autopsies, etc., but at present is confined to laboratories, class rooms, and hall for clinics. The *School of Agriculture* is a fine large building in the suburb

of Sayago, 45 minutes by electric from the center of the city, fare 10 cents. The edifice contains excellent laboratories, class rooms, and general offices, and is doing an important work of great value to the country. The four-story building near the harbor landing, formerly occupied by the University, is now used as an Engineering School.

A *Pedagogical Museum* of considerable interest to one with some knowledge of educational problems and work, is on the north side of the Plaza Libertad next to the *Athenaeum*, an institution of much literary and scientific importance in Montevideo.

Another educational edifice which some may be glad to visit is one which houses both the *Military Academy* and the *Naval School*. The situation is a convenient one on the edge of the city with grounds covering 30 acres, yet only 15 minutes by electric car from the center of the town. The building with a façade 250 feet long fronts on Ave. Garibaldi, but sets back 60 feet allowing space for a pretty garden. In the left wing are the class rooms of the Military School, in the right those of the Naval. On the next floor are dormitories, baths, etc. In the center are rooms common to both, a casino, fencing-room, and a large hall for festal occasions. Above is a tower with steel cupola for the Astronomical Observatory. In the rear are great depots, naval and military, a large gymnasium, a swimming tank, 100 by 150 feet, stables, hospitals, a riding course, athletic field, etc. On the inside, covered galleries permit passage from one building to another in the rain; the U shaped constructions surround a large space ornamented with trees. There is excellent ventilation in the main building, windows on both sides, so that in class and in the infirmary each student enjoys much more air space than the highest amount prescribed.

The *School of Arts and Trades* in San Salvador street, between Minas and Magallanes, may be reached by cars 36 and 46.

Other institutions which may be visited are the *Penitentiary*, the Markets, and the Cemeteries. The first may not interest every tourist; but if one desires to see a model construction of this category, arranged according to the most modern tenets of penal science and of hygiene, the oppor-

tunity here presented should be seized. It has a fine situation near the river on Punta Carreta (30 minutes by Car No. 35, fare 8 cts.), especially open to the southeast winds well ventilating courts and interiors. The rectangular plan was preferred to the radial. Back of the administration building is the entrance to the prison proper, which is surrounded by a great wall nearly 40 feet high. Here a military guard is placed. On one side of a central corridor is the kitchen and bakery, on the other, the laundry. Separated by a large court from these is the prison house with 384 well lighted cells, each 13 feet long, 8 wide, and over 10 feet high, furnished with iron folding bed, book shelf, bench, and porcelain bowl and seat. Opening on a corridor 20 feet wide, the cells are arranged in 4 stories, to which lead marble and iron staircases and elevators. Fifty baths are at the service of the prisoners, who may choose either warm water or sea water for their ablutions. Workshops of eight classes are provided for the convicts: iron and tin work, carpentry, broom and shoe making, printing, and book binding. Two patios, 160 by 220 feet, afford space for recreation, and there is room within the enclosure for two more prison houses if at any time they are needed.

Every one likes to see *Markets* if not prisons. Of these there are four, most important, the new market *Agricola* for wholesale trade, built of iron except for the base wall, and roofed with glass according to the Dion system, the construction covering 65,000 square feet with a central height of 72 feet. Provision is made for the entrance and circulation of carts; four galleries 45 feet wide surrounding the large central open space provide shelter for attendants and for the service of the market.

Of the four cemeteries, the *Central* at the foot of Yaguaron street is called the best; the *Buceo*, which is the largest, may be reached by Car 39, and by Car 38 which runs to the suburb *Union*, passing the Buceo and the beautiful *British* Cemetery adjoining. All of these are finely situated on a bluff above the water. They are adorned with trees and flowers, and contain many fine monuments, some of which are sculptured by noted artists.

The Parks and Watering Places, most important features

of Montevideo life, have perhaps been left too long; they are attractions of the highest rank which no one should overlook, however short his stay. The largest and finest park is called the *Prado*, which contains also the *National Botanical Gardens*. One may here roam for miles among immense magnificent trees, half a century old, sheltering smaller palms and bamboos, flowering shrubs, and beautiful gardens; here too are lakes and grottoes, vegetation of cool and of warmer climes, a region more delightful on account of the hills and hollows with which it is diversified, in pleasing contrast to the flatness of the Argentine shore. The park, which is surrounded by villas and chalets, is approached by three fine avenues and may be reached by three lines of cars, 2, 44, and 47 (8 cts. fare) in 25 minutes.

A little nearer the city and on the other side, close to the ocean, is *Parque Urbano*, served in a ride of 20 minutes by six lines of cars, Nos. 5, 6, 7, 33, 36, and 46, with 4 cts. fare. This is a most popular recreation ground, a large park with trees, flowers, lakes, pretty bridges, etc., a great circular avenue, a theater of novelties, and near the entrance on the side towards the sea a *pavilion* where popcorn is made and sold by a fine young man and his happy looking wife, both from the United States. Popcorn is a new and popular article of food for the natives; every *American* will certainly wish to buy some. Business is good and the young couple enjoy the place and the people, though now expecting to come home some day. The seashore in front is called *Playa Ramirez*, a fine bathing resort. On the sands stand a multitude of little bath-houses on wheels, which a horse draws out into the water, thus permitting less display of gay bathing costumes or of bathers than on our own beaches, a custom with obvious advantages. The men generally go in on one side of the iron pier, the women and children on the other.

Close to the Park and the Beach is an imposing hotel and casino, four stories high, the *Urbano*, with 300 rooms, a great dining hall, and other salons, called the finest and most luxurious hotel in South America. It was erected at a cost of \$600,000, and since it was opened in 1909 it has been a point of attraction to many of the best Argentine society, as well as to the people of Uruguay.



SOLIS THEATRE



GOVERNMENT PALACE

Pocitos, a little farther out, is another much frequented bathing resort. The Thursday and Sunday concerts at both beaches attract thousands. In the vicinity are many fine residences. A splendid esplanade along the shore leads to *Trouville*, another beach beyond. *Pocitos*, the most fashionable of the resorts, also has a hotel of the first rank.

On the port side of the city many improvements have been made and more are planned. Along the south side of the promontory a fine esplanade is to be constructed to extend also along the east shore to Ramirez and *Pocitos* in the manner of the *Avenida Beira Mar* at Rio de Janeiro. *Pocitos*, a 30 minutes' run, is served by the cars 31 and 37, fare 8 cts.

Under the head of parks may be included the *Zoological Gardens* at *Villa Dolores* (cars 38 and 39, time 20 minutes, fare 8 cts.), a private property, but open to the public for a small fee. In addition to a considerable collection of animals, unusually extensive in the line of birds and domestic fowls, there are various artistic features, artificial grottoes, lakes, waterfalls, imitation of classical ruins, etc. A rather original feature is a little cemetery of various animals, their graves marked by life-size sculptures: lions, dogs, a rabbit, a cock, even a huge anaconda, a curious collection. The entrance fees are devoted to charitable institutions of the city.

The *Hippodrome* and horse races, if not quite equaling the grand display at Buenos Aires, are in excellent style; the accommodations are elegant and luxurious, and the races under the direction of the local Jockey Club are fashionable events where many notable horses have appeared. The receipts are in the neighborhood of \$2,000,000 annually, the prizes in 1910 were over \$400,000. The Hippodrome, established in 1888 at the suburb *Maroñas*, may be reached by Cars 13, 17, and 51 after a 45 minutes' ride, for the sum of 10 cts. Races occur on days of *fiesta* from the first Sunday in March to the middle of January. During the short vacation the horses rest and take sea-baths at *Buceo* beach near by. At the gala events, when 15,000 people may be present, elegant toilets are much in evidence, with many automobiles and carriages. The betting is said not to be carried to such an excess as in some other places, practiced not as a means of livelihood but as a pastime, as people bet only what they

can afford. A members' stand was recently erected at a cost of \$60,000. In the same direction is the *Parque Central*, a ground for athletic sports, served by Cars 51 and 52 in 25 minutes at a cost of 6 cts. The people are fond of sports, and football is a high favorite; 10,000 persons may attend matches.

The *Immigrants' Hotel* on Bella Vista Beach, opened July 18, 1908, is an excellent institution, capable of receiving 1000 guests, and containing all suitable offices.

In mentioning these points of interest several suburbs have been spoken of, but others should if possible be visited, as these form one of the great attractions of the city. One of the most enjoyable and important of these excursions is to the *Cerro*, a hill overlooking the bay, to be reached in 55 minutes by No. 16 car, fare 14 cts., or by ferry from the landing every half hour, fare 10 cts. It is well to go one way and return another. While the hill is not very high and is easily climbed it is notable for several reasons. It was the occasion of the name, Montevideo, *I see a mountain*; it is the first true hill on the banks of the Plata, and, far more wonderful, it is the last (so Mr. Koebel says), for over 1000 miles; since the river Paraná, as well as the Plata, flows through a very flat country and the next hill is close to Asunción in Paraguay. Other hills there are in Uruguay and higher, but these are along the Atlantic coast and not on the rivers. From the Cerro there is a varied panorama, worth seeing if one has time to devote to the excursion—on one side the bay, the city on the promontory, lapping over on the mainland, the coast line, and the ocean slightly blue; on the other the level shore and the yellowish brown river.

Of the nearer suburbs the Paso Molino on the way to the Prado is one of the best residential districts. The suburb of Colón, car 41 (60 minutes, 14 cts.), is one of the prettiest; this car passes through Sayago suburb where the Agricultural Institute is situated. The ride is a charming one, with pretty *quintas* all along (houses set in their own gardens), and at Colón restaurants, pleasure gardens, and miles of avenues of stately eucalyptus trees.

Other Towns. If one has time for more distant excursions there are a number of places which deserve a visit, some of

these more accessible from Buenos Aires. The old town of *Colonia*, to which boats often run from the Argentine capital, is across the river, and three miles from that old-fashioned, quiet city is a new resort called *Real de San Carlos*, where a great hotel is planned and where some attractions are already installed, a bull ring, though the fights are now discontinued, another ring for *pelota*, a fine, sandy bathing beach, a modest hotel.

The great *Liebig Establishment*, its products of world-wide fame, situated at Fray Bentos on the Uruguay River, is also easily visited from Buenos Aires. This Company, now with a capital of \$5,000,000, with *estancias* in Paraguay and in several provinces of Argentina, established its first factory at *Fray Bentos* in 1865. Since that time, in addition to enormous development there, another large plant has been created, 10 miles farther up the river, but on the other side, in Argentina. Their beef extract, their Oxo capsules, and their Lemco have a deserved reputation the world over, as for these productions the best of meat only is used, instead of the leavings of poor or diseased meat said to be employed in some other establishments. All of the products are obliged to undergo a strict test in order to have the use of the Liebig name. For their employees, 1500 in number, pleasant homes are provided, medical attendance, schools for the children, recreation grounds, etc.

From Montevideo excursions may easily be made to two unique resorts in Maldonado, the next State east of Canelones in which the capital is situated. Both of them face the broad Atlantic, though still on the south shore. Especially should every lover of nature, of plants and trees, improve this opportunity. Not money-making pleasure-grounds are these, but each the labor of love of a Uruguayan gentleman of public spirit and of great wealth.

Punta Ballena has been converted into an Eden by Antonio D. Lussich, founder of the first life-saving station in America. A natural diversity has been intensified by art. The Point by a ridge is divided into two parts—on the east are green meadows, lakes, woods, and animals; on the west, nature is stern and savage with rocks and barren sands, grottoes, etc. On a height which commands a view of the Punta del Este, the

sea, the Lobos Island and Lighthouse, Señor Lussich has constructed a residence with a beautiful garden in which roses are a specialty, and a wonderful park including among the reputed two million trees the finest collection of eucalyptus in South America, more than 100 varieties.

Piriapolis. Probably even more worthy of a visit is Piriapolis, to which a railroad has recently been opened. Francisco Piria, possessor of an immense estate in this region, in addition to beautifying a portion, has initiated a reform now being followed by others. He sells on easy terms to the poor considerable tracts for cultivation. The city which he has laid out on the seashore is called an enchanted region unlike any other. Surrounded by mountains in the form of a horse-shoe open to the sea, it is arranged with avenues 100 feet wide and with twenty plazas. A still wider avenue five miles long, in part macadamized, bordered by large trees, crosses the entire property. On the city streets are 40,000 tall eucalyptus trees twenty years old, arranged in perfect lines. The beach, the finest on La Plata River, beautifully smooth, so that children can bathe in safety, has an area of 150 acres. Around the city, and in one large grove are several million trees, 15 to 20 years old, some, 120 feet high. The hotel, called the finest in the country, has 140 elegantly furnished suites with great salons and dining hall, a portico 250 feet long. In front a beautiful park overlooks the ocean; at the sides is the *Park of Roses*, where Señor Piria has planted 30,000 rose trees. Besides these there are groves of willows, walks, and a trellis more than a quarter of a mile long, affording grateful shade. Close by is a Casino four stories high with a 300-foot front. An artesian well supplies daily 10,000 gallons of good water. All modern conveniences are provided, such as the latest electric and laundry devices.

Two hills separate this beach from the next. On *Cerro Ingles* is a Fountain of the Virgin, of mineral water which has constructed a stalactite grotto. On the *Cerro de los Toros* is another mineral spring. High up among grottoes and cascades, in a semi-circular wall of rocks, is a bronze bull of double size, weighing nearly three tons, with a stream of clear water from the rocks above issuing from its mouth. On the same hill is a Greek temple to Aphrodite 30 feet high,

the cupola supported by six marble columns; in the center a bronze Venus with a jug under her arm from which will pour daily 5000 gallons of mineral water. All of the spring waters have been analyzed and pronounced good for dyspepsia. At the summit of this *Cerro de los Toros* is a kind of crater, at the bottom of which, to be seen only from the top of the hill, are woods and meadows. On the *Pan de Azucar*, one of the surrounding mountains, sheltered by a natural wall of granite, is a row of colossal palms. A chalet has here been erected for the benefit of youths making an excursion. On the *Cerro Ingles* as well, there is a chalet for tourists. The mountains around, of much interest, are also a source of great wealth, being composed of superb porphyry, black with veins red or white, red with black veins, green with white, about 50 beautiful varieties. The *Pan de Azucar*, nearly 2000 feet tall, alone is of rich granite, with blocks 200 and 250 feet high, from which monoliths may be taken. Señor Piria has in this section a ranch with blooded cattle, a tract of vineyards, a grove of 10,000 olive trees, and a chateau and other buildings erected at a cost of \$100,000. The place is three hours from Montevideo by sea and now that it is accessible in two hours by rail, it will soon become widely known as a resort of extraordinary charms.

CHAPTER XXVII

BRAZIL—ALONG THE COAST TO SANTOS

THE extent of the great country, the exact title of which is the United States of Brazil, most of us hardly realize. With fifteen times the area of France, it covers more ground than the United States without Alaska and our more recent acquisitions, is larger than the whole of Europe, and is fifth in size (Percy Martin says third) among the nations of the world. While now it contains barely 22 millions of inhabitants, about five to the square mile, the great scientist and explorer Humboldt once prophesied that it would in the future be the most thickly settled portion of the globe, since from the richly productive nature of the soil life may there be supported with small exertion.

Of a somewhat triangular shape, Brazil extends a distance of 2600 miles from north to south and 2700 from east to west. Although in large part under or near the equator and without lofty mountains, it yet has considerable elevation, averaging 2000 to 3000 feet over more than half of its territory; not enough to occasion extreme cold anywhere, but sufficient to induce a more healthful and comfortable climate in such sections. Bordering on every South American country except Chile and Ecuador, it is favorably situated for having intimate commercial relations with all, when its settlements have spread out in every direction, instead of being chiefly in districts near the coast, with a few in the Amazon valley.

HISTORICAL

Accidentally discovered by Europeans within ten years after the first landing of Columbus on Western soil, some years elapsed before it received a permanent settlement. Pedro Alvarez Cabral, a Portuguese nobleman, by good fortune holds the honor of having in 1500 first beheld the most eastern shores of the American continent.

Sailing from Lisbon for the East Indies with a fleet of vessels, Cabral was instructed by Vasco da Gama who had made the first all-sea voyage to that region to bear away to the southwest, in order to avoid the frequent calms off the coast of Guinea, until he should reach 34° south latitude when he should turn east. While following these directions, on the 2d of May Cabral sighted a mountain which, as it was Easter week, he called Paschoal. The next day he anchored off shore of the present State of Bahia, to commemorate which event, May 3 is a Brazilian national holiday and the date of the assembling of Congress. Ten days Cabral remained at anchor taking formal possession of the land, and having some communication with the Indians who appeared friendly. On the news reaching Portugal in the fall, another expedition was at once sent out and the coast was explored almost to La Plata, nearly 2000 miles, by Amerigo Vespucci, who was, however, disappointed by finding no wealth of gold or silver and no civilized inhabitants. The only article of immediate value seemed to be brazilwood which, furnishing a bright red dye, was in demand in Europe. Thus the land was called the Country of Brazilwood, soon shortened to Brazil.

The name America later bestowed upon the land which Vespucci explored, and which *he* first declared to be not a part of the Orient but a separate continent, was afterwards extended to include the northern half. Thus it seems peculiarly unfortunate that we should arrogate to ourselves the title of being *the* Americans, our only apology for so doing being the fact that we have no other name by which we can be called, a fact, however, which does not entitle us to forget that *there are others*.

The first real settlement by the Portuguese was made in January, 1532, at São Vicente near the port of Santos, soon after which a second post was established on the high land above, in the vicinity of São Paulo. Subsequently grants were made by King John III of Captaincies, twelve in number, each, one hundred fifty miles along the coast; these beginning at the mouth of the Amazon and extending south to the island of Santa Catarina. Six permanent colonies were founded, but the only ones early amounting to much were Pernambuco and São Paulo, later Bahia and Rio de Janeiro.

The Jesuits, who were prominent in the early settlements, gave particular attention to Christianizing the Indians, bringing them into settlements under their jurisdiction and instructing them both in agriculture and in various industrial arts. Their labors were chiefly in the States of São Paulo and Minas. As their system interfered with the exploitation of the Indians by the Paulistas these attacked the Jesuit settlements, within twenty-five years, it is said,

killing 300,000 of the natives, and finally destroying all the Jesuit settlements on the upper Paraná.

In 1558 a nobleman, Mem da Sa, a soldier, scholar, and able administrator, as Governor, succeeded in consolidating the government of the various colonies and in establishing the Portuguese power on a firm basis, in spite of difficulties with Indians and with French settlers. In 1581 Philip II of Spain by obtaining the crown of Portugal became also the ruler of Brazil. During the sixty years of Spanish domination the expansion of Brazil to the west in territory which had been assigned to Spain was permitted, as a matter of no importance, later, however to involve unforeseen consequences.

In the seventeenth century there were years of struggle against the Dutch who first, in 1623, captured Bahia, to lose it in 1627; in 1630 they captured Pernambuco which they retained twenty-five years, at one time having under their control two-thirds of the population and developed resources of Brazil, Bahia and the southern provinces alone remaining in the hands of the Portuguese. Portugal having meanwhile recovered its independence from Spain, the Brazilians made continued efforts under the leadership of John Fernandez to expel the Dutch. At last they succeeded and January 26, 1655, the latter signed a capitulation for the surrender of Pernambuco and all other holdings in the country. This struggle fostered the development of a national spirit among the colonies, while the fact that the coast was held by the Dutch impelled the opening of land routes of communication in the interior. Cattle ranges became numerous, rumors of gold were heard, and in 1690 the Morro Velho, one of the great gold mines of the world, was discovered.

The eighteenth century saw many conflicts in the south, in Rio Grande and Uruguay, but in 1777 peace was declared with boundaries as at present. During this period occurred a literary development, six of the leading Portuguese poets appearing, not in Rio, but in Minas, twenty days on muleback from the coast. In 1807, John, Prince Regent of Portugal, came over, fleeing, with his court and with much property, from Napoleon. Received with enthusiasm, he opened to commerce the five great ports, encouraged literature, art, science, and education, and the immigration of foreigners, thus inaugurating a movement which gradually transformed the country. After the fall of Napoleon, Prince John, returning in 1821 to Portugal, left his son Pedro in charge, with the hint that if there was any likelihood of Brazil asserting her independence, as the Spanish provinces had done, he should put the crown on his own head. This on October 12, 1822, he did, being crowned Constitutional Emperor of Brazil. The separation from the Mother

Country occurred without bloodshed in Rio, while from the remaining ports the Portuguese garrisons were expelled with little difficulty. Troubles came afterward. Pedro, regardless of the constitution, attempted to be a despot. After quelling a revolt in the north, becoming involved in war with Argentina which ended with the independence of Uruguay, and having alienated his earlier supporters, he was compelled in 1831 to abdicate in favor of his infant son. Stormy times continued so that after a nine years' regency Pedro II, when only fifteen, was proclaimed of age and took the throne. Nine years more were required for the pacification of the whole country, when prosperity of all kinds followed. In spite of the expensive war with Paraguay and other drawbacks, commerce increased, general industry developed, and political reforms were instituted. In 1888 during the absence of Dom Pedro in Europe a bill for the abolition of slavery, having passed both Houses of Congress, was signed by Princess Isabella as Regent. In 1889 the old Emperor, who had returned, was summarily expelled, without even twenty-four hours' notice to gather together his belongings; the diffusion of republican ideas among the soldiery making the revolution possible without bloodshed. A Provisional Government instituted many reforms, organized the Provinces into States, established universal suffrage, the separation of Church and State, etc. A Congress was assembled in February, 1891, a constitution was adopted, and Deodoro was elected President. Extravagance and insurrections followed, then financial distress which reached its height in 1900. Since that period the country has advanced rapidly in wealth, population, and in all other lines of development.

The individual States are less closely bound together than with us, and have greater power, being able to fix export and import taxes against each other.

Before embarking at Montevideo for Brazil it is wise to procure a little Brazilian money, which is more troublesome than any other. A milreis is about 33 cents; but instead of having 100 cents in what might be called their dollar they have 1000 reis. Five hundred reis sounds like a good deal; to pay 200 or 300 for car fare appears quite exorbitant; but remembering that 100 reis is only $3\frac{1}{3}$ cents it seems more reasonable.

The large majority of tourists will embark at Montevideo for Santos in one of the fine ships of the Lamport & Holt Line, the Hamburg American, or the A boats of the Royal

Mail, all of which are comfortable, even luxurious. Ten days *must* be allowed, and from twenty to thirty will be enjoyed in the delightful cities of São Paulo and Rio de Janeiro. Brazil is an immense country, larger, we must remember, than the United States proper, and to see São Paulo and Rio only, affords little more knowledge of the Republic than a glimpse of New York and Boston gives of ours; yet in a four months' tour of the continent, that is all that can be arranged. The traveler with more time at his command may find pleasure and profit in visiting other portions of the great Republic. This may be done, so far as Southern Brazil is concerned, in two different ways. The tourist may take at Montevideo one of the boats of the Brazilian Lloyd Line, which call at the principal ports all along the coast, and thus journeying in complete comfort, may visit many prosperous cities, where he will be astonished by the high degree apparent, of culture, of business energy, and of rapid growth and progress. Or, if preferring as long as possible to avoid the sea, he may proceed from Montevideo to Rio all the way by land, and thus gain some idea of the great interior country, here so different from the vast Argentine plain, with much variety in scenery and enormous possibilities for future development.

This railway journey at present requires four or five days to São Paulo, more time than by express steamer, and involves more fatigue and hardship. At last accounts there were no through sleepers, the road in places was rough and dusty and altogether slow. The distance to Rio is nearly 2000 miles. But on a new road through a rapidly developing country, quick changes and improvements may be looked for, and by the time any of my readers is ready for the overland journey, it is highly probable that it may be made in three days, perhaps in through sleepers. In one of these, the tourist may now set out from Montevideo, where details as to the comforts and duration of the journey may best be secured. The entire region is scantily peopled all the way to São Paulo and there is no unusual or striking scenery, except in ascending to the plateau beyond Santa Maria in the state of Rio Grande do Sul, and in the descent to the town of União in the Iguassú Valley. Along the route traveled, Uruguay and Southern Brazil show a pretty country of rolling pasture land

to Passo Fundo in Rio Grande do Sul; then comes a hilly district covered with primeval forest, chiefly pine, to Ponta Grossa in Paraná and beyond, and in the State of São Paulo highlands, agricultural and pastoral. A few villages of from 500 to 5000 people are scattered along the way, with two towns, Santa Maria and Ponta Grossa, of about 15,000 each. Within a few years it is possible that a cross railroad, already planned, will be built from São Francisco on the coast to União, the station above referred to in the Iguassú Valley, and thence onward to the Iguassú Falls and Asunción. When this road is finished it may be desirable to visit Montevideo from Buenos Aires; returning thither one might go by rail or steamer to Rosario and Asunción, then across to the Iguassú Falls and on by rail to União and thence proceed to São Paulo. A coast railway is now planned between Rio and Porto Alegre (963 miles) by which it is expected that the journey will be made in 25 hours.

Rio Grande do Sul. By a coasting steamer, one will first visit the State of Rio Grande do Sul, the most southern in Brazil, well away from the tropics, hence with a temperate climate, much like that of Georgia, and largely settled by Germans. For a State with considerable seaboard, the location of its three chief cities on a fresh water lake or lagoon may at first appear curious, yet of course there is a reason. The coast being flat and generally sandy the best harbor is the lagoon, separated from the sea by a sandy spit of land only a few miles wide. The entrance, a narrow strait near the south end, has a considerable sand-bar on which engineers have been at work to secure a passage 33 feet deep, affording ingress to large ocean steamers. This will greatly augment the present important commerce. The larger steamers now entering go only to the city *Rio Grande do Sul* at the southern extremity of the Lagõa dos Patos, Lagoon of the Ducks, named from one of the tribes earlier inhabiting this region. The town has fine wide streets, many handsome buildings, and in the Praça Tamandaré, on which stands the Post Office and *Public Library*, one unique feature: the only *monument* in Brazil, it is said, *commemorating the freeing of the slaves*. The citizens are justly proud of their Library of 40,000 volumes, probably the best south of São Paulo, and of the fact

that they possess the *oldest newspaper in Brazil* except the *Jornal do Commercio* of Rio.

Porto Alegre. As the Lagoon is 150 miles long (30 wide), it is a long sail, 12 hours, to Porto Alegre, the capital and chief town of the State at the northern end. Three hours from Rio Grande a call is made at the pleasant town of *Pelotas*, beyond which there is little to see on account of the width of the lagoon. The beef industry in the form of salt beef factories is a chief feature of the prosperity of Pelotas, and rows of beef strips hung up in the sun to dry, with an occasional factory, may be seen for miles along the shore. Porto Alegre, settled in 1742 by colonists from the Azores, after the Prussian Revolution in 1848 received many Germans, so that one-fourth of its 100,000 inhabitants are now of German descent. The town has some handsome public buildings, including a City Hall with marble columns from native quarries, and some that are old and ugly. A large stone building near the quay houses the public market, where fruit, vegetables, dairy products, etc., are sold at modest prices in comparison with those at Buenos Aires and Rio. The climate is healthful, with some freezing weather in the winter, and snow in the mountainous section inland. Minerals are found in the State, including coal, but the chief wealth is cattle; not the blooded stock of Argentina but good enough for jerked beef. Also agricultural products are important, one settlement, chiefly of Italians, exporting annually a million dollars' worth. A beautiful waterfall 400 feet high called Herval may be visited a few hours from Sapyranga on the railway between Porto Alegre and Taquara.

Going north from Rio Grande the steamers of the Brazilian Lloyd and the Costeira lines call in the next State, Santa Catharina, at its capital *Florianopolis*, one of the most picturesque of Brazilian cities, on an island of the same name. Facing the mainland five miles across the Strait, with a background of hills rising from 1000 to 3000 feet, it is a charming contrast to the more level country previously visited. In the principal plaza a stone monument with a pyramid of cannon balls at the top commemorates those who, as Volunteers, perished in the Paraguayan War. Though a town of 30,000 people it is a quiet place where they mostly stay at home

evenings and go to bed by ten o'clock. A little farther north, the port of *São Francisco*, called the best south of Santos, from the building of the Iguassú, Paraguay, and other railways is destined to be of great importance.

Paranaguá. In the State of Paraná, one of the most beautiful of Brazil, detached in 1858 from the State of São Paulo, a call is made at Paranaguá, its chief seaport, from which *yerba mate*, grown in the interior, is an especially important export. In this State and the next, the larger and pleasanter cities are on the high land in the interior. The low semi-tropical strip along the shore is separated from the plateau region within by the Serra do Mar or Coast Range, extending far north very near the shore. Rivers, like the Iguassú and Paraná, rising almost within sight of the Atlantic, flow thousands of miles to increase the waters of La Plata. The capital city, *Curytiba*, with 50,000 inhabitants, may be visited by rail from Paranaguá, a delightful four hours' journey of 60 miles, among the valleys and up the slopes of the hills and mountains of the Serra do Mar, the climb to an altitude of 3000 feet being made without cogs or cables, by means of high trestles, bridges, and 17 tunnels. The journey is said to surpass in beauty the better known ride from Santos to São Paulo, presenting a variety of natural scenery seldom found in so short a trip, along with rich semi-tropical vegetation, pine forests, and manifestations of industrial development. The State spends more in proportion upon education than does any other in Brazil. It possesses unlimited resources in cattle, agriculture, mines, and forests. The pine tree of Brazil, the *Araucaria brasiliensis*, especially prominent in this State, differs greatly in appearance from pines in the United States. They are a striking feature of the landscape, growing with a single straight trunk, sometimes 125 feet, with a diameter of six feet. Thus they somewhat resemble a palm, though crowned at the top with branches in shape like a bowl, bare to the end, where globes of dark crispy green leaves recall a candelabrum. All parts of the tree are useful; the fruit is edible, the nut is used to manufacture buttons, and the wood, for building and other purposes.

Beyond Curytiba the road goes on to meet the through line from Montevideo at Ponta Grossa. Not far from the junc-

tion is a curiosity called *Villa Velha*, old village, reminding of the Garden of the Gods, but even more remarkable. The reddish rocks of sandstone have had part of their formation cut away by time and water, leaving rocks which resemble houses, walls, or ruins, some, 300 feet high like castles and towers, with low bushes growing among them, the whole having the appearance of an abandoned city. Curytiba, like São Paulo, though much smaller, is a wide awake, modern city with handsome buildings, hotels, etc., and a boarding and day school conducted by two American ladies. An important industry is the preparation of *yerba mate* for market, 20 large mills existing for this purpose in various parts of the state. The *mate* profits sometimes reach 100 per cent.

In the vicinity of *Antonina*, a pretty town on the same bay as Paranaguá, is a curiosity called *sambaquys*, mounds, 71 in number, the work of a pre-historic race containing skeletons, pieces of pottery and of polished stone of varying aspect, apparently indicating a progress in culture through generations. Unfortunately many of these remains have been put to the prosaic use of making lime, but some near Lagõa Santa still await the archæologist and the ethnologist.

CHAPTER XXVIII

SANTOS AND SAO PAULO

THE State of São Paulo, called the most progressive, if not the most important in Brazil, has for its chief seaport the city of Santos, to which the majority of tourists will have come by express steamer from Montevideo. Every ship calls at Santos, even coming up to the docks, so that all must see this city. The only question is whether or not to go up to São Paulo, distant two hours by rail. This *should* be no question. Every one must go if only for the ride and a glimpse of this prosperous and busy capital, returning the same afternoon. Fare one way 12\$900. Should the steamer's schedule not permit of this excursion, one should still go, and either wait over until the next steamer, a ticket on the Lamport and Holt serving also on the Royal Mail, or proceed from São Paulo by rail to Rio, fare 54\$500. Or if preferred, one may continue in the same steamer to Rio, thence return later by rail to São Paulo, and embark at Santos on his homeward journey, an arrangement which affords certain advantages. In this way one has the great pleasure of twice entering the magnificent harbor of Rio, which it were a pity to miss altogether. On the other hand, journeying by rail from São Paulo one may, if on the right train, enjoy a wonderful view of the city and harbor while descending from the plateau above down to sea level. But as somewhat similar views may be had from Coreovado, Tijuca, and the road to Petropolis, this is less important and desirable than the view of Rio from the sea, peculiarly entrancing at early dawn. To stay over from one weekly steamer to the next is not too much if one cares to visit a coffee plantation and see a little of the country; a day or two is better than nothing.

The name of São Paulo, the greatest coffee-producing region of the world, is less familiar to people generally than that of its seaport, Santos, as the name Santos is attached to a very

small portion of the coffee thence dispatched to all quarters of the globe. As almost every one occasionally or regularly drinks coffee, under the name of Java, Mocha, or another, *which has been grown in São Paulo*, there is an especial interest in learning something of the country. São Paulo is an active flourishing State, not at all in accordance with the general idea of Brazil, chiefly associated with the hot Amazon basin; it is an upland temperate region of 75,000 square miles, a trifle larger than the whole of New England with New Jersey added.

Brazil, like most other tropical lands, is fortunate in having a fair portion of her surface considerably elevated above the sea, and thus with an agreeable climate of quite temperate character. The Coast Range, which includes the Serra do Mar extending from Espirito Santo to Santa Catharina is indeed a godsend to the country, endowing it, through regions of great extent, with wonderful scenic beauty, besides modifying the climate; while in São Paulo and Minas Geraes, a parallel range with two peaks, Itapeva and Marins, 7000 and 8000 feet, confers additional advantage. Between these two ranges, as also west of the second, the land is high, the lowland being confined to a narrow strip along the coast. Unlimited water power, one estimate is 2,000,000 horsepower, now unexploited, is a valuable asset of the State; for the various tributaries of the Paraná have a number of large cataracts both useful and beautiful, the Itapura Fall 1500 feet wide and 40 high, the Avanhandava 50 feet high, and others. In spite of this the rivers in considerable stretches are navigable. Besides the cultivation of coffee for which the State is pre-eminent, sugar, cotton, rice, and tobacco, fruit and cereals are, or soon will be, important productions.

Santos. The port of Santos (Hotels, Grande, Washington, Internacional), called one of the best and most important of the world, receives annually more than 1500 steamers besides sailing vessels. The largest ocean liners anchor alongside the quay, which extends from the São Paulo Railway Station two miles down along the front of the town. The fine docks were built by a local company, which in 1892 began the construction, on a base from 10 to 20 feet thick, of a huge sea wall of granite rising 5 feet above high water mark. Hydraulic



PORT OF SANTOS

and other machinery is provided to receive and discharge freight, and commerce has grown rapidly until, in 1911, it amounted to \$160,000,000 exports and \$65,000,000 imports.

Santos is an ancient town founded in 1544 or earlier by Braz Cubas. A hospital established by this gentleman, the first charitable institution in Brazil, was called Todos os Santos, from which the name Santos was gradually used to designate the town. After his death at an advanced age, Braz Cubas was buried in the chapel of the hospital. Its early origin might seem to indicate that the place was particularly unhealthy, and it has in fact had a bad reputation as a seat of yellow fever; but for some years now it has been as healthful as need be. The State and City authorities, awaking to the importance of such matters, accomplished the sanitation of the port by means of a perfect system of drainage and a good water supply.

Though the fact is not apparent, Santos, a city of 70,000 people, is situated, 3 miles from the ocean, on an island, the northeast shore of São Vicente; but so close is the island to the mainland that in the dry season when the river has no water it becomes a peninsula. On the opposite side of the river-like channel by which ships enter the harbor, is a larger island, Santo Amaro. It is all very pretty, as luxuriantly clad hills slope almost to the water's edge. At the southwest end of the island, São Vicente, is the old town of that name, an hour by rail from Santos. Toward the south end are two popular summer resorts where some of the Santos people, especially the foreigners, live all the year around, while from the interior many come down for the summer. At the entrance of the channel called Guarujá, the fortress of Barra Grande on the east guards the harbor, while opposite is the suburb of Barra with charming country homes. Half way up the channel the docks give evidence of commercial activity. Opposite the city of Santos on the island Santo Amaro, beyond the hills is the seashore resort *Guarujá*, called the most picturesque in South America, on a rounded knoll overlooking the ocean, among higher hills clothed with virgin forest. This fashionable resort which is reached by means, first, of a short sail across the channel, then of a half hour's railway ride, not so grand or expensive as Mar del Plata, has natural

advantages far greater. Near the white sandy shore are pretty streets lined with chalets and Queen Anne cottages, a casino, a large hotel with gardens, and luxuriant natural vegetation; accommodations may be procured here at reasonable prices, except during the season, when people from all over Brazil make the place full to overflowing.

At Santos every one goes ashore if only for the few hours that all ships tarry. The business streets are close by and the pretty central plaza but a short distance. This old part of the city between the docks and the 15th of November street preserves the narrow old-fashioned *alleys*, we should call them, of the colonial period, by no means unpleasant on a hot day. Although warm, it is usual to see persons hurrying about, for business is done between ten and four, a shorter day than in most Brazilian cities; here imperative, as many business men daily come in the morning from São Paulo, returning by the afternoon train. A Brazilian writer whose translator's English is frequently amusing says, "People do not run, they fly. The sweat dampens the collars, the converses are resumed to the exchange of monosyllables, as it is necessary that everything be finished before the last train starts." Away from the business section are broader streets and fine houses, with a hotel called excellent. Two long wide avenues, Nebia and Anna Costa, crossed by streets which are gradually being built up, extend towards the sea. Street cars run in this and other directions, and if time permits it is a pleasant ride to a pretty seashore suburb with rolling surf and attractive dwellings at the end of the route.

But now we must climb the Cubatão Hill, we might even say mountain, to the capital city, by the *São Paulo Railway*. An elevation of 3000 feet is gained in a very short distance, as the Serra do Mar is indeed close to the shore. The height seems too steep to climb with any ordinary means, and in fact it is. Extraordinary means are employed, inclined planes on a much larger scale than we have seen before, of novel construction and carrying regular railway coaches. It is a strange and wonderful ride through tropical forests, along the side of steep inclines of great picturesque beauty. Often when the region is shrouded in mist a rift therein, disclosing a tremendous chasm below, has a rather startling effect.

This railway is ranked by experienced British engineers among the great mechanical achievements of the world, such as the Brooklyn and Forth bridges. Due to the initiative of Visconde de Mauá, it makes an ascent of 2600 feet in the short distance of seven miles. Beginning only 15 feet above the sea five inclined planes with a grade of eight per cent, each about a mile and a quarter long, serve for the rapid climb. Four intermediate levels of about 600 feet each separate the planes; a bankhead at the top is a little longer. Above each plane is a stationary engine to run the cables, and to grip these a small special engine is attached to each car. The winding engines for the cables are built under the track, partly underground, receiving light from the side. One is surprised to see two double roads, but the first proving insufficient for the freight traffic, soon after 1895 a new incline was begun, just above on the same slope, with improved technical arrangements. The tracks are very curious. On the inclines each double track has but three rails for both up and down, these being 1.6 meters distant one from another, the middle rail serving for both the ascending and the descending cars, which obviously do not meet on the inclines, but may on the intermediate levels. On each side, in the center of the space between the middle and the outside rails, the pulleys are fixed which carry the cable. This is an endless steel wire of enormous strength, run by a 1000 horsepower engine, and capable of carrying 6 freight or 3 passenger cars at a time. The entire capacity of the cables is 17,500 tons daily, or under pressure 22,000 tons. These remarkable engineering works as greatly deserve the attention of the tourist as the scenery. In this short section there are 16 viaducts, 15 tunnels, and two miles of retaining wall, with a volume of masonry exceeding 80,000 cubic meters. For one cutting over 150 feet deep, 300,000 cubic meters of earth was removed. The Grotta Funda viaduct is 334 feet long and nearly 150 feet high in the center. Two viaducts have masonry arches, the rest steel. A difficult problem was the drainage, and many surface drains of the extensive system may be observed in passing. The road, though but 100 miles long, extending from Santos to Judiahy and passing São Paulo half way is one of the richest in the world. In spite of the enormous expense involved in

its unusual construction, from the fact that it carries the most freight and charges the highest prices, it yields the largest dividends of any road in Brazil, sometimes fifty per cent. Its heaviest earnings come from the transport of coffee, as in the section served by this line there are perhaps 15,000 plantations with 500 million coffee trees. From these the road carries 7 of the 10 million bags annually exported, besides ordinary freight transportation. The passenger traffic hardly pays, or greatly increases in volume, as the two hours' ride from São Paulo to Santos is more than most men care to take daily.

SAO PAULO

HOTELS. The Sportsman, the Grand, the Majestic, the Albion.

After climbing the mountain side, an hour more over a rolling country brings one to the station called Luz, in the city of *São Paulo*, said to be the largest and most costly railway station in South America, and one of the finest in the world. The tracks are arranged below the street level, hence there are no grade crossings. This city, the second in Brazil, and with its about 400,000 inhabitants taking third position among the cities of South America, will be a surprise to most travelers. Located on the Tropic of Capricorn, its elevation gives it a healthful climate which in combination with other advantages has produced men awake to the spirit of progress and eager to develop the astonishing resources of this richly endowed State. The city is not only the capital and the seat of State Government, but a notable center of education and industry, and the home of many men of great wealth. It is an ancient city, going back to the middle of the sixteenth century, 1554, its name São Paulo, which had been previously applied to a Jesuit college here, being transferred to the new settlement by the Governor General of Brazil, Mem de Sá. Though of greater age than any city in our own country, for three centuries it made small progress. In 1872 it was a town of 26,557 people. But within the last forty years it has shown amazing growth, which few of our cities can parallel, an increase of nearly fifteen fold. Although on the edge of the tropics, from its elevation of 3000



LUZ STATION, SÃO PAULO



MUNICIPAL THEATRE

1871
1872

feet, it has a climate like that of Southern Europe. From the neighboring mountains it receives an excellent water supply, while its site on rolling ground affords excellent drainage facilities and in places a splendid outlook.

The hotel accommodations are unfortunately inadequate for the rapid development and business of the city. They are fairly comfortable, though apt to be over-crowded. It is well if possible to engage a room in advance. The *Sportsman's Hotel* on the rua São Bento is by some called the best; the *Grand*, the *Albion*, and the *Majestic* are not far distant. The prices are all about the same, from \$3.50 to \$5.00 a day, American plan. A new hotel is now being constructed, large and modern. The main streets of the business center, naturally the old part of the town, are rather narrow and not all checkerboard fashion as in most of the cities visited. This, no doubt, is due to the fact that the surface is irregular, with hills and valleys such that in one place a viaduct 800 feet long and 50 wide, called the *Viaducto Chá*, forms a curious street leading from the rua Direita over an old part of the town, once a tea garden, to a hill in the newer section, where the handsome *Municipal Theater* is situated. This imposing edifice, with streets on all sides, recently erected at a cost of a million dollars, compares with the best in Europe and surpasses any in the United States. The seating capacity is a trifle less than that of the Paris Opera House. The seats for the orchestra are, according to the Wagner system, placed below the general floor level.

The commercial center of the city, not far from the hotels mentioned, is a triangular plaza called Tiradentes. The rua São Bento, the Quinze de Novembro, and the Direita are the principal shopping and business streets. The *Largo de Palacio* is a square near by, on which is the fine *Palace of Congress*; the handsome *Agricultural Building* of the German style; the *Treasury*, covering 700 square meters, the work of a Brazilian architect, Ramos Azavedo; and the *Judiciary Building* of the Roman Doric order. Other noteworthy buildings are the *Post Office*, the *Exchange*, the *Chamber of Commerce*, and the *Public Library*. Some of the finest streets are the Avenidas Tiradentes, and the Rangel Bestana passing the Largo de Concordia with the always

interesting Market Place, the ruas da Liberdade, Santo Amaro, da Consolação. The last three lead to the splendid Avenue Paulista, with shaded parkway along the center, the finest boulevard of the capital, on which are many of the handsomest residences. Of course the city has electric lights and cars, and many miles of fine asphalt pavements, though in the outskirts, on account of the city's rapid growth, there may be a few streets yet unpaved, which should be avoided. Automobiles and fine carriages are numerous, and delightful drives may be taken to see the fine public buildings and the multitude of charming and splendid private residences. From a residential point of view few more attractive places will be found anywhere. The many churches one writer calls magnificent, another says only the modern ones are of artistic merit. The *Cathedral*, the churches of *São Pedro*, *S. Gonçalo*, and *Remedios* are among the most important.

Many of the fine buildings of the city are devoted to educational purposes. The city takes especial pride in its *Polytechnic School*, said to be the best in Brazil, in view of its fine laboratories, the practical character of the studies, and its imposing edifice opened in 1894. Instruction is given in architecture and in civil, industrial, agricultural, mechanical, and electric engineering. Also it has a School of Chemistry, with courses in dentistry and obstetrics. The Government maintains a *Law School* having a five years' course. Its library of 50,000 volumes is free to the public. About the same size is the general *Public Library*. The fine large *Normal School*, overlooking the Praça da Republica, occupies a whole square near the center of the city. With a library of 12,000 volumes, with laboratories, museums, rooms for manual labor, gymnastics, and military exercises, it is said to be equal in equipment and installation to any in America. A kindergarten, equal to the best in any part of the world, occupies an annex. A *Commercial School* for training book-keepers and tradesmen, is included in the educational system. A spacious building east of the Jardim Publico is occupied by the *Lyceum of Arts and Trades*, where various trades are taught, such as tailoring, carpentry, printing, and many others. This institution, with towards 1000 pupils, is sup-

PLAN OF
COLUMBIA



YPIRANGA MUSEUM



HOTEL OF IMMIGRANTS, SÃO PAULO

ported by a private association. Especially noteworthy by Americans is the famous *Mackenzie College*, opened in 1892 on the corner of rua de São João and Ypiranga. Schools of lower grades were established in 1870 by Presbyterians, gradually becoming a complete graded system from kindergarten to high school. On this model the government schools were largely planned and on the floor of the Brazilian Congress the school system was said to have been the greatest factor in their educational development of the last twenty years. The college was the first of American fashion in Brazil. Coeducation is followed, though the girls live elsewhere. The Chamberlain Dormitory was erected in 1901 for the boys. The President of the College is Dr. H. M. Lane, and the institution is affiliated with the University of the State of New York.

One of the most important points of interest in São Paulo, though on the outskirts of the city, at the same time a monument and an institution of learning, is the *Ypiranga*, a splendid edifice erected in 1885 on the spot where, in 1822, the Independence of Brazil was proclaimed. As it is regarded as one of the finest structures in Brazil, the name of the artist, Caviliere Tomaso G. Bezzi, is given. The building, which fronts on a broad open space, houses a museum with treasures of historical and scientific interest, many curious and valuable relics, and fine paintings by Brazilian artists. The beautiful Park, the *Jardim Publico* or *Jardim da Luz*, will naturally be visited by every one. Directly opposite the Luz Station, created by Royal Charter in 1790, it was first opened in 1825. Adorned with a profusion of flowers, trees, a pretty lake, and other decorations, it is a delightful resort for resident and stranger.

Well worthy of a visit is the *Hotel of Immigrants*, a large establishment fitted up in the most sanitary and appropriate manner. Thousands of families from Europe are here welcomed annually, and entertained free of charge for a short period. A Government agent speaking their language meets the strangers on their arrival in Santos, and escorts them to this Hotel. Later they receive free transportation to wherever in the State they desire to go, and their interests are

looked after by a board. This State is the only one with its own especial department of immigration and active propaganda.

High-grade institutions of a sanitary character are numerous in the city, as a Bacteriological, a Sero-therapeutic, a Pasteur, and various other Institutes. Fine large hospitals for general and special diseases, and for colonists of various nationalities, will be observed in an extended drive.

Coffee. If time permits, the tourist will surely enjoy a visit to a great coffee plantation. There are none in the immediate vicinity of São Paulo, but it is a pleasant journey of 80 miles to the city of Campinas, in the vicinity of which are *fazendas* galore. This is one of the oldest and most flourishing towns of the State, with a population of about 50,000, modern and prosperous, well paved and lighted, with good schools and a fine large Cathedral.

The State of São Paulo now furnishes one-fourth of the world's coffee supply and this section is one of the largest producing districts in Brazil. Near Campinas, the great *fazenda* of Baron Geraldo de Rezende will charm the favored visitor. A magnificent house and gardens, with a splendid collection of rare orchids and 800 varieties of roses, are a not unnatural possession of the owner of half a million coffee trees. A much vaster estate but too remote for many travelers to inspect is that of the coffee king of the world, Col. Francisco Schmidt. Coming as a colonist to this state he has achieved a success of which one might well be proud. Of the 700,000,000 trees in the State, Col. Schmidt owns more than one per cent, $7\frac{1}{2}$ million. On the various plantations live 8000 people, contented and prosperous; a school is provided for each village. The soil and climate of São Paulo are so well adapted to this industry that the crop is several times as heavy to the acre as in most other coffee growing countries. A family of three or four persons can take care of 10,000 trees and by cultivating other agricultural products at the same time could live on the proceeds.

In 1817 the first shipment of coffee was made from Brazil, about 6000 bags; in 1906, 13 million bags were exported, 10 million being the average. The consumption of coffee in recent years has wonderfully increased. Though generally



COFFEE FAZENDA



COFFEE TREE

considered less injurious than tea, both should be utterly tabooed to children and young people. To persons of mature years who have not taken it earlier to their injury, its moderate use may not be harmful, in some cases may even be beneficial. In humid climates it seems to be used freely with less ill effects than in a dry and bracing air, where habitual stimulant of any sort may be undesirable.

Although famed for its coffee, São Paulo can produce almost anything else: rice, sugar, cotton, tobacco, tea, cocoa, wheat, corn, sweet potatoes, other vegetables, and fodder plants are among its products. Of these, the *marmallade de cavallo*, is called the most nutritious of fodder plants known.

From São Paulo to Rio the journey may be made by land or sea. If going by rail, one may be advised to take the night train, on the ground that there is nothing to see, that it will be dusty, and that the ride of 12 hours is a long and fatiguing day's journey; the distance is about 310 miles. Also a day is thus gained to spend either at São Paulo or Rio. On the other hand, some persons who have made the trip by daylight speak of it with enthusiasm. In the early morning one passes on gentle slopes fields of glossy green coffee trees, groves of oranges, jungles of palms and bananas, with enormous clumps of feathery bamboo, and little towns on the hillsides. At the stations are women selling fruit, and negro boys with trays of tiny cups of black coffee, hot and sweetened. After a while an alluring stream is passed, with pleasant towns. Midday is hot and dusty. Farther on are reddish grassy slopes and in climbing the wooded ridge many cattle may be visible. Higher ascends the train, the valleys are blue below: delightful scenes are on every hand, mountains abrupt and fantastic appear. Yet ever there is soft rich verdure; at last comes swift descent towards a panorama of wonderful loveliness. At dusk the train rolls into Rio, where, says the *Involuntary Chaperone*, "All the dreams come true."

CHAPTER XXIX

RIO DE JANEIRO—BAY AND CITY

NEARLY all tourists, whether from the north or south, will arrive at Rio by water. Leaving Santos in the late afternoon, on a fairly swift steamer, one is liable, unless an early riser, to find the ship at anchor in the harbor when he comes on deck in the morning. But if never at other times eager to see the sun rise, or impatient to behold beauties which are permanent in character, let every one who has the smallest appreciation of glorious scenery be awake to enjoy the entrance into the harbor of Rio, which to many will be the culminating joy of the whole delightful journey. With the good fortune to approach at daybreak under propitious skies this magnificent harbor, unrivaled upon the globe, one will rejoice in a vision of splendor surpassing his highest conceptions of beauty, forever to be treasured among his choicest memories. One who is loath to lose his early morning nap may fancy that to view the spectacle towards sunset as one sails away homeward will answer just as well; but such is not the case. It is the morning light on the triple range of hills behind the city, which lies west of the entrance to the bay, that enhances the ever charming scene to a spectacle of unparalleled loveliness.

From a distance, if heaven send no veil of mist, will be seen on the landward side a row of incomparable titans guarding the city; islands also appear: on the right, a large flat rock, Ilha Raza, bears a lighthouse with double electric lights, red and blue, and if one is coming from the north, the Itaypu Point is rounded with the pretty little Father and Mother Islands near; approaching from Santos these appear farther away at the right. The lofty hills or mountains at the left attract the most attention. In the distant blue or

purple, a gray bald head called Gavea is noticeable, a famous landmark of the harbor, in the profile of which some fancy a resemblance to Washington. While still outside the harbor we see other summits, the less known and less sharp peak of Andarahy, more distant, Tijuca and the Organ Mts., and nearer, at the right of Gavea, the world famed *Corcovado Needle*, with the city at its foot, or perhaps we should say head, since the point of the needle, the smaller end, is quite obviously above. Whatever else in Rio be neglected, the Corcovado must be known and visited. Other cities have boulevards, if less beautiful, fine buildings and parks; but there is one Corcovado in all the world. Still approaching the narrow harbor entrance we have glimpses of the city close to the portal, and notice that its suburbs even stretch to the ocean and along splendid beaches quite to the foot of Gavea; while on the opposite shore also are many dwellings. Long before, we have admired the celebrated *Pão do Assucar* (loaf of sugar), a striking and enormous conical rock over 1300 feet high, standing forth boldly into the channel entrance, which it guards upon the left, while opposite on the right a rough rock promontory, together with the Assucar, forms a splendid gateway.

Not merely rock protection has Rio but in these days of jealous strife she must needs possess grim fortresses also; on the right Imbuhy and Santa Cruz, on the left São João and Mallet. The multitude of peaks and heights around the city a Brazilian writer speaks of as "a lively guard produced by the contortions of a cataclysm." To him everything seems dancing. In truth when the heavenly tints of sunrise are added to the wondrous shapes and hues of ordinary day, the picture has an unearthly beauty which no tongue or pen can describe.

As we pass the Assucar close at hand, we perceive that while the other rock faces are smooth, bare, and practically perpendicular, this side is rough and shows a bit of green, no doubt the slope where once the ascent was made, so the story goes, by a hardy Englishman who planted on the summit a British flag. A great hue and cry followed this daring act. A reward was offered to any one who would fetch the banner down. The bribe was vain, till at length the culprit,

detected, himself removed the offending colors from the staff which long remained above.

Just beyond the Assucar, on the curving shore, we see a part of the fashionable residence district. On the edge of the first deep bay, a large building devoted to the Ministry of Agriculture may be distinguished, and close by, the Benj. Constant Institute and the National Hospital for the Insane. On the eastern shore of the bay is Jurujuba, the hospital for epidemic diseases, the pretty beach of Icarahy, then Nietheroy, a pleasant town, capital of the State of Rio; for the *City* of Rio de Janeiro is a Federated Capital like Washington.

This wonderful bay, opening towards the south, contains an extraordinary number of fascinating little ones of graceful outline, with which acquaintance should be made later. Attention is now directed to the wooded slopes and rock cliffs of the serried peaks and mountain ranges, to the smiling city, to the blue waters thickly sprinkled with ships, and dotted with islands. The bay has the name *Guanabara*, as well as the more familiar one, Rio de Janeiro; the former an Indian name, arm of the sea, now more frequently applied to the inner and larger portion of the gulf; the latter given by mistake when it was first visited January 1, 1502, by Gonzalo Coelho, who without sufficient exploration, supposing it to be the estuary of a great river, called it Rio de Janeiro, River of January. From this the people later were called *Fluminenses* or River Folk.

In 1531 the French took possession of the bay, to be driven out soon after by Alfonso de Sousa who erected a small fort. The French returning in 1555 under the command of Villegaignon effected an entrance to the bay, fortified an island and established a colony largely of Huguenots who maintained very friendly relations with the Indians; but in 1560, Mem de Sá, the Governor-General of Brazil in Pernambuco, which was earlier settled, established a fort on the peninsula in front of the Sugar Loaf, São João, and captured the island stronghold of the French, who, retreating to the mainland, there remained with the support of the Indians. In 1565 Estacio de Sá, nephew of Mem, arrived with reinforcements. After much fighting, concluded by a fierce battle between the Morros (hills) da Gloria and da Viuva, when the French and Indians were routed, the site of Rio fell into the possession of the Portuguese. On the death of Estacio from a wound

received in the last battle, Mem de Sá founded a city which he called São Sebastião. This he left in charge of his nephew Correia de Sá on the Morro do Castello.

Once more, in 1710, the French returned. They entered the town, but in the streets were assaulted so fiercely that they capitulated. After their commander Du Clerc had been mysteriously assassinated, another French fleet arriving defeated the Portuguese; but after taking possession of the city later withdrew on receiving a heavy indemnity.

In 1762 or '63 Rio was made the Capital of Brazil and the residence of the Viceroy in the place of Bahia; partly through the efforts of Gomes Freire de Andrade, Count of Bobadella. During his administration a notable work was achieved, the construction of the great aqueduct of Santa Theresa, by which water was brought from the Carioca River to the center of the city. It crossed a part of the town on a double archway, which now bears a tramway. Other improvements followed, including the draining of the great marshes, in the section near the present Mangue Canal. By the close of the eighteenth century Rio was not only the chief city of Brazil but the largest and most important of South America. Not so favorably located as to back country as some others, especially São Paulo, its fine harbor gave it commercial importance, greatly increased by the discovery of gold and precious stones in the State of Minas, as by this port most of the adventurers entered, thence following a long Indian trail.

When the Royal family arrived from Portugal in 1808 the city, the largest in South America, had forty-six streets, nineteen open squares, many churches, and the usual public buildings. Its growth, though continuous, has been hampered until the last decade by the unhealthfulness of the city, especially the scourge of yellow fever, also by wars, extravagance, and other troubles. With the reorganization of the finances of the country and the establishing of its credit during the Presidency of Dr. Campos Salles 1898-1902, the regeneration of the city under the later Presidents was made possible and the expenditure of \$100,000,000 for improvements in the Federal District within the last ten years. On the most charming site imaginable a new and splendid city has been created which, still in the process of transformation, soon will even better compare with its uniquely beautiful surroundings.

To one entering the bay, which is nearly 100 miles in circumference, its great size is not apparent, as the large inner sea is cut off by points and islands in such a way that the shape and magnitude of the entire gulf is undisclosed. Its

configuration as a whole is remarkably like that of the country, roughly triangular with the apex at the south. Among the numerous islands, three close to the shore may be particularly noticed: the Island Cobras with a fort where political prisoners have been confined; the Fiscal Island upon which is a pretty Gothic structure, headquarters of the Custom House inspectors, hence the name; and Villegaignon, named for its first settler, also bearing a fortress.

Your ship may sail past the greater part of the city to the new and splendid docks where you may step ashore at your ease, or pause at a common anchorage in front of the main business section of the city, where you have the advantage of landing at the Caes dos Mineiros close to the Custom House. All about are ships of every size and as usual of almost every nationality except our own. Once indeed I saw here the Stars and Stripes, floating above the deck of a schooner from Maine, on its annual visit to bring ice and apples from that cooler clime. Yachts and launches, pretty and plain, gasoline and rowboats flit about, among ships of larger size, at anchor or sailing, two of these probably the great Brazilian warships, the Minas, and São Paulo, a few years ago the scene of serious unpleasantness due to a marine insurrection.

The city, stretching for miles along the curving shore, presents a most attractive sight. With corresponding depth its size would be immense, but its width is barred, as effectively as is New York's by its two rivers, by the high steep range which leaves small space between its foot and the sea; indeed, it thrusts forward several sharp projections quite into the water, and chains of modest hills over which the dwellings climb. Thus the city is subdivided into many sections, to which one may proceed only in a roundabout manner. Straggling in a charming way over the level patches of ground and part way up the lower slopes of some parts of the lofty rearward rampart, it affords room for a population now practically a million, with plenty of space for more. The second city in the Southern Hemisphere, the fifth in all America, though older than any in the United States, its modern growth and development have been brief and rapid.

But without more ado we must hasten ashore and have a closer look at the beauties spread before us. If at the docks,

a few steps out, through the fine warehouses or around them, bring one to a broad splendid avenue where passing cars will in twenty minutes bear its occupants to the center of the city, and to the Alfandega or Custom House. Also carriages may be in waiting, a trifle dearer than in Buenos Aires, but with modest fees as compared with New York. From the anchorage, one must take a boat to the steps of the Caes dos Mineiros, where men and boys wait to conduct you to the Alfandega for the examination of baggage. This may be a tedious operation which a judicious tip is liable to accelerate. As the office is closed from 11 to 1, it is important to be early on shore, else you may be compelled to return in the afternoon for your heavy baggage, or even to wait until the next day. Officials and underlings are usually polite, but here often slow.

HOTELS AND RESTAURANTS

HOTELS. The *Avenida*, Avenida Rio Branco; *Estrangeiros*, Praça J. de Alencar; *International*, Sylvestre; *America*, Cattete; *France*, Praça 15 de Novembro; *Allen's*, Rua Humayta; *Tijuca* (Tijuca); *Grande*, Lapa; *Globo*, Primeiro do Março; *Pensão Suissa*, Largo da Gloria.

Restaurants. *Frankiskaner*, Avenida Rio Branco, 152; *Heim*, Assembleia, 119; *Londres*, Assembleia, 115; *Paris*, Uruguayana, 41; and others.

United States Consulate and Embassy: Avenida, 117. **British Consulate:** Rua General Camara 2.

Churches. British, Rua Evaristo da Viegas; American Methodist, Rua Conde de Baependy.—Y. M. C. A. Building, Rua da Quitanda 47.

Money. A milreis is 33 cents; 100 reis 3¼ cents; a conto is 1000 milreis, written 1000\$.

Carriages. Four wheels, for two, first hour, 6\$; second hour, 3\$; two wheels, for one, 4\$, first hour; 2\$, second hour.

Taxis. (For one or two persons), first hour 8\$; second, 4\$. Course about a mile 1.\$400, for each quarter mile after, 200 reis.

Postage. Two hundred reis to the United States or Europe.

Language spoken, Portuguese; also often French. Spanish generally understood.

CHIEF POINTS OF INTEREST

Avenida do Rio Branco, the National Library, the Fine Arts Museum, the Cathedral, and the Candelaria Church, the Praças 15 of

November, and Republica, the Passeio Publico, the Beira Mar, the Botanical Garden, the Pão de Assucar, and—CORCOVADO.

It is a great advantage to have selected one's hotel in advance and to have rooms engaged, as the three leading establishments are a long way apart.

The *carregadores* who have numbers on their hats may usually be relied upon to bring in time your baggage to its destination. Some haggling over the price is usual, as large fees are demanded; not too large perhaps for those who carry them on foot, but more than an ordinary express company would ask for the same distance. The *carregadores* carry suit cases and other small packages, several of them, on their heads, at least to the cars, where they must pay their fare. Also it must be said that baggage is not allowed in electricies of the first class (I did once smuggle a suit case) nor—*make a note of this*—is any man allowed without a coat, however hot the weather. Even on the street a *gentleman* under no circumstances is expected to carry his coat over his arm. One American who did so was politely accosted by a Brazilian who said, "Man, coat put on!" in the best English he could muster. Two milreis would be charged for two or three pieces of hand baggage to the Avenida Hotel and four or five for a trunk, which would be pushed in a hand-cart; double to the Estrangeiros, less to the Suissa. For the International Hotel, the Express Company must be employed, but with that there may be considerable delay. Each hotel has its own especial merit, which to some minds would outweigh all others and render possible a decision without personal observation; many will prefer to spy out the land for themselves. It has been said that there is no really first-class hotel in Rio, but a Ritz Carlton now being constructed on the Avenida with accommodations for 1200 visitors, will be opened in 1914. As hotels are liable to be full, it is wise to telephone before going to look at rooms.

First may be mentioned the *Hotel Avenida*, American Plan \$5 up, not because it is the best, but as being in the center of things, right on the main business street, the new Avenida Rio Branco. Many lines of electric cars start from beneath its portico and nearly all the others pass within one or two

blocks. Naturally it is noisy but persons accustomed to our city streets will hardly mind. This hotel, having a restaurant with all night service and music every evening, is the largest in Brazil. Many English speaking tourists, however, prefer one of the other two. The *Hotel dos Estrangeiros*, the Strangers', is a large establishment facing the Praça José de Alencar, a charming ride of 20 minutes from the Hotel Avenida in the direction of the Assucar, mostly along the boulevard by the sea called the Beira Mar. The hotel is not far, about two blocks, from the water, which may be visible from the upper windows in the rear; in front several lines of cars diverge in various directions. The table is no more than fair, though perhaps as good as any; the price, 12 to 15 or more milreis daily being sufficient for what is provided. Opportunity for sea bathing is near; also for hot and cold baths in a hydropathic establishment. The *International Hotel*, which seems more out of the city, though reached in about the same length of time from the Avenida, is recommended as cooler in the hot season, from October to April, and is by many preferred at any time, on account of its delightful situation 1000 feet above the sea on the way to Corcovado. Though the ride is but five minutes longer, the cars do not go so often as to the Estrangeiros, which is served by all the cars of the Jardim Botânico Co., these passing in an almost continuous row under the Hotel Avenida. The cars to the International set out once in 20 minutes from the farther side of the Praça de Carioca, a Square just behind the Hotel Avenida; the invisible starting point is around at the back of a certain building. This line, called the Santa Theresa, goes by the rua do Aqueducto over the arches which once bore the aqueduct, across a portion of the city from a hill, the Morro de Sto. Antonio, to that of Sta. Theresa, the latter being rather a ridge extending from the peak of Corcovado. On the steep slope of the ridge the International is situated, where the nights are ever comfortable, while the journey to and fro is always a delight. The hotel has many suites of rooms and bath with hot and cold water, and is a favorite resort with many. At these three hotels the rates are much the same.

Should one prefer a more modest establishment with lower

prices, a finer outlook than any save the International, and more conveniently located than any but the Avenida, he may go to the Pensão Suissa, kept by a motherly German Frau, only ten minutes from the Avenida by any of the Jardim Botânico lines, and looking out upon the bay, the Gloria hill, the lovely Beira Mar. The rooms are as neat as possible, so that I was able to reply to a gentleman's query as to red ants that I had seen none, which seemed to him a great surprise, as he supposed that every dwelling in Rio contained them. The various other hotels and pensions are not without merit and patrons.

One may generally get settled in his hotel in time for the noon meal, though the luggage is not likely to arrive before the middle of the afternoon. Yet the time should be improved, either by sight-seeing in the middle of the city, or if one is tired by a ride to some of the suburbs. A few tourists, caring little for the commercial and business section of the city, devote their entire time to the wonders of the jewel's marvellous setting. The center of the city should not, however, be ignored. Yet a ride in car or automobile, according to the length of the purse, will be a delightful beginning for the eager tourist. In an auto one may skim over a great part of the city's boulevards in a single afternoon. Our admiration for these magnificent drives and parkways, unsurpassed in the world in their opportunities for delightful hours, will be heightened if we are mindful of the astonishing transformation which has here been wrought within the last decade. In 1903 Rio was a dirty, not to say filthy, city of narrow streets, a place to be shunned, as often a hot bed of yellow fever. For its regeneration various plans had previously been proposed, but President Rodriguez Alves was the man who put one of these into execution.

The slowness of Latin Americans (in fact of every one but themselves), so favorite a theme in the talk of their northern neighbors, does not appear in this instance. It would puzzle us, I think, to find in the United States any city, save San Francisco when necessity compelled, where by works of such magnitude a great city has so speedily been metamorphosed through the destruction, replanning, and rebuilding of some of the most compact and important busi-



AVENIDA DE RIO BRANCO



BOULEVARD BEIRA MAR FROM PENSÃO SUISSA

ness and residence sections. Nearly \$60,000,000 was devoted to this great transformation.

The plan which was approved in September, 1903, included the construction of a great quay arranged for ships to come alongside, furnished with storage warehouses, railways, and electric lights, with a parallel avenue 125 feet wide and 2 miles long; the improving of a cross canal to the sea by making it a solidly walled stream, with on each side an avenue shaded with palms; the lifting of the railroad from street level to a viaduct 16 feet above; the construction of a broad avenue straight to the Quinta of Boa Vista, residence of the late Emperor; the increase of the water supply; the renovation of the sewerage system with all modern improvements; the removal of several hills; the filling in of large sections; the widening of a number of streets; and the formation in the heart of the city of a new avenue a mile and a quarter long and 120 feet wide.

The inauguration of the great work of the Avenida Central, as it was originally called, a broad thoroughfare crossing, from one side to the other, the shallow peninsula occupied by the commercial district, on the front of which is Caes Pharoux, occurred March 8, 1904, with the participation of the President and other officials and with much enthusiasm on the part of the people; as a broad outlet for the future traffic of the port was seen to be an absolute necessity. The foundations of the building numbered 2, 4 and 6 being then begun, the great task was swiftly advanced. Day and night was the work pushed; 600 buildings within three months were, by 3000 workmen, utterly demolished, opening a space 230 feet wide: 65 feet each side for the new buildings, 120 for the central paved roadway, and 20 for each sidewalk. Along the center of the avenue a row of 53 Pão Brazil trees was planted in beds 16 feet long, and 55 posts bear each 3 electric lights. On the sidewalks are more trees, and posts for illumination by gas. As the trees grow larger the beauty of the avenue will be increased. Most of the new buildings, which mark the introduction into Brazil of American steel frame construction, are of fine types of architecture in a variety of styles.

In other sections 1200 old buildings were sacrificed to open

or widen a dozen other streets, these now from 55 to 100 feet wide, paved with asphalt or in a few cases with fine granite blocks. On all sides new buildings sprang up by magic.

Of still greater magnitude and requiring more time was the improvement of the port, now approaching completion. The stone quay more than two miles in length, with sufficient depth of water to allow ships of any draught to come alongside, is provided with the most modern machinery for hoisting, loading and unloading ships, and with two stations supplying electric power for these as well as for lighting already in service. Back of the wall, a space where formerly were bays and islands has been for the most part filled in, at some points for a width of 800 feet. Then along the quay a broad avenue was opened. A width of 80 feet for railroad tracks, of 110 feet for storage warehouses (called *armazem*) and for administration offices, is followed by the broad well paved avenue 125 feet wide, bordered with trees and with double tracks for electric cars. To fill in this great space sand was dredged from the bay, and earth was brought from Senado Hill, now completely leveled.

While these great matters were undertaken by the general Government, the new Mayor of Rio, Dr. Francisco Passos, attended to the broadening of other streets, repaving with asphalt or with granite blocks; to the embellishing of the city with gardens, etc., and to the construction of the beautiful boulevard four miles long and 110 feet wide along the water front towards the Pão do Assucar. Even the resurrection of San Francisco in one way seems less wonderful than Rio's transformation, in that the former was compulsory, the latter voluntary. The greatest work in Rio was more in preparing anew the foundations than in the actual construction. It was, says the Brazilian writer from whom I have already quoted, "the work of an enterprise." He modestly says that there is nothing especial to say about the buildings of Rio. As to those of a residential character he asserts that some are nice, "but the majority of them is an awful sight reminding antiquity." To me they did not so appear, the many being pretty and tasteful, if unpretentious, while the dwellings of the poorer classes are less hideous than those inhabited by the poor in our own country.

While the most delightful of the hours spent in Rio may be those devoted to excursions to the suburbs, one should visit also the commercial section, the public buildings, the shops, the market; and traverse some of the streets, wide and narrow, where the life and business of the city go on. A day or two may profitably be spent in the busy marts of trade.

One may set out from Caes Pharoux, to which suitable attention will hardly be given when landing. Here is a great Square or Plaza, in Portuguese a *Praça*, that of *November 15, Quinze de Novembro*. At the right as you face the waterfront is the *Ferry House* for the boats running across to Nietheroy. From here also depart excursion boats on Sunday for a trip around the bay. The *Praça* has the usual pretty garden in the center, with a bronze equestrian statue of *General Osorio, Marquez do Herval*, one of the commanders in the Paraguayan War, and also leader of the State forces of Rio Grande do Sul in an insurrection against the first President of Brazil. On the right hand side of the square, as one faces the water, near the *Ferry House*, is a four-story building more than 150 years old, of typical colonial architecture, once the residence of an aristocratic family, now a lodging house. The large terra cotta building is devoted to the *Ministry of Transportation*. The two-story pink building, higher in the center, is of greater interest. Erected in 1747 and now occupied by the *Department of Telegraphs*, it was first the home of the Colonial Governors; on the arrival of Prince João it became his residence, and later served as the *Imperial Palace*. It was here that the Princess Regent, Isabella, signed the Emancipation Decree, May 13, 1888, as a tablet on the wall sets forth, and from here the Emperor Dom Pedro was taken, Nov. 17, 1889, to be placed upon a warship and banished to Europe, after the proclamation of the Republic, Nov. 15.

On the street, rua Dom Manoel, which separates these two buildings, next to the Ministry of Transportation, is a large green edifice which houses the *Naval Museum*. This Museum, founded by imperial decree in 1868, was opened to the public in 1884 with inaugurating ceremonies by the Emperor. On the anniversary of the battle of Riachuelo, an important naval victory in the Paraguayan campaign, the museum was first

opened in its present quarters June 11, 1898. Free entrance daily, from 11 till 2, except Sundays and holidays. The first section of the museum contains 29 oil paintings of Brazil's great naval battles, 15 of these by the celebrated marine artist, Chevallier E. de Martino, a protégé of Dom Pedro II, and later named by Queen Victoria Marine Painter to the Court of England. Picture number 5, of the battle of Riachuelo, is considered one of his best works. In the second section are portraits and photographs of the Ministers of Marine and naval heroes, including the British Admiral Cochrane, who also helped the Spanish Americans in their struggle for independence. Becoming Marquez do Marenhão he received a grant of land now held by his heirs. The third section contains models of vessels, from the new Dreadnoughts down to canoes and fishing boats. The fourth contains flags and standards, the fifth, samples of artillery, cannon, and projectiles, the sixth, hand weapons, such as spears and rifles, the seventh, naval and Indian relics and curios, the eighth, medals, souvenirs, etc.

The large Praça has a smaller continuation at the west, facing which, on the corner of rua 7th of September, is the *Cathedral*, to which a great tower is now being added. On the other side is a larger church which might be mistaken for the official building. Neither is especially handsome, inside or out, both interiors being in an ornate rococo style which may be admired by some. The Cathedral, however, has as a feature of historic interest a slab set in the wall at the left of the altar bearing an inscription in memory of the discoverer, Pedro Alvares Cabral, whose remains were brought from Portugal and interred in the wall of the tower in 1903.

The Cathedral, founded in early colonial days, with this tower is less overshadowed by the larger Igreja (Church) do Carmo on its right. When the tower foundations were sunk, a stratum of sea sand was struck containing fragments of ancient sea craft, showing that the shore is now greatly advanced. The completed tower will be the highest structure in the city. With clocks on three sides it will carry a chime of bells, the largest of which, weighing $2\frac{1}{2}$ tons, was cast in Portugal in 1621. In the interior of the Cathedral is a fine

main altar, back of which is a painting of the Italian School. Sub-altars to the Virgin are on each side of the nave, and one to Santa Rosa de Lima, Patron of South America. Near the main altar is the throne of the Cardinal Archbishop, and formerly there was in front of this a chair of state for the use of the Emperor. A flag carried in the Paraguayan War by the regiment of Volunteers of the country is near the high altar. In the second niche on the right, to one entering, is a "Christ of the Jury," torn by a mob of Anti-Clericals from its place in the Jury Court. Later a new one was there placed with great pomp and processions.

On the other side of rua 7th of September is a large white building where the *Commercial Museum*, open from ten to four, may be visited. Business men and others are welcome, and a Bureau of Information is at hand for the service of commercial men and manufacturers. Here may be studied the coffee grades of the world's great markets, the decisions of the Tariff Commission, 229 varieties of Brazilian vegetable products, including dyes, inks, aromatics, gums, resins, and foods, with many medicinal plants, used among the natives but unknown to the scientific world. Here also are 50 varieties of fibres, 2000 varieties of Brazilian wood, ten of cotton, an exhibition of the process of rubber making, etc.

In the same building is the *Instituto Historico e Geographico*, a society founded in 1838 with a membership from among the most intellectual men of the country. There is a large collection of rare books and manuscripts, also busts of bronze and marble, and relics of various kinds, one of these the old Roda or wheel used to receive children at the Casa dos Expostos. This hollow wooden cylinder with an opening at the side was fixed in the wall. A baby might easily be deposited within and the wheel pushed around carrying the baby inside, when a bell would ring in the convent summoning the Sisters to receive the child, which was taken charge of and brought up with *no questions asked*.

To the south of the Praça beyond the Ferry House, and close to the water, is the ever interesting Market Place. Fruits, flowers, birds, meat, vegetables, and people, all merit attention, as do the well constructed booths and the attractive cleanliness of the place.

From this square many lines of electric railways lead in various directions, but it is only a short walk to the Avenida by the street at the corner of the Cathedral, or by several parallel streets. It is better perhaps first to turn to the right and follow the important street, *Primeiro de Março*, parallel to the bay front. On this street is the *Post Office*, the *Bolsa* or Stock Exchange, of Italian style, one of the finest buildings of the city, the *Bank of Commerce*, and the *Supreme Court* edifice of beautiful rose-colored stone and marble, sumptuously decorated without and within. The *Alfandega* or Custom House, of a green color, may be seen from this rua, nearer the shore, on a street of the same name. From the *Primeiro de Março* many narrow streets lead to the Avenida, which some of them cross, among these the *Ouvidor*, long the most famous thoroughfare of Rio and still the fashionable shopping street. Now alas! it has received another name, *Moreira Cezar*, so you may look in vain for the *Ouvidor*, though every one still calls it by its old appellation. This fascinating little street is hardly 20 feet wide. The narrow sidewalks are almost too smooth and slippery with variously colored tiles. No carts or carriages are allowed in the street, the center of which, well paved, is used by pedestrians. The street is the rendezvous of high life, as well as of idlers, students, politicians, and tourists. Here are the most elegant shops, jewelry, book stores, dry goods, etc., with cafés and clubhouses, some fine buildings, and others poor.

But before crossing by this to the Avenida, the *Candelaria Church* a little to the north, on a narrow street of the same name, should be visited. This, called the richest church in Latin America, deserves a better location on a broad plaza, rather than here on this little street. The edifice, planned and built by a Brazilian engineer, *Evaristo da Veiga*, has three finely carved bronze doors, and a rich and elaborate interior. Fine marble columns, a beautiful ceiling with mosaic decorations, and fine paintings by the best Brazilian artists, excite admiration.

CHAPTER XXX

RIO DE JANEIRO—CONTINUED

THE Avenida do Rio Branco, so called since the recent death of the famous Baron of that name, formerly the Central, is claimed by Brazilians to be the most beautiful street in the world. Though, from one or another point of view, other partisans may dispute its pre-eminence, there is no question as to its splendid construction and imposing edifices, which for variety and beauty it would be difficult to match within the same distance in any other city. Every style of architecture is represented, Moorish, Gothic, Italian, etc., with varied and lovely coloring. Minarets and towers, unusual mosaic sidewalks, the welcome shade and friendly green of trees, the dashing automobiles, fashionable and beautiful women, men from almost every clime contribute to the wonderful Avenida. Made to order, so rapidly as to take one's breath, it is indeed a notable, a marvellous achievement: begun in 1904, finished in 1906; and not this only, but the beautiful Beira Mar as well. It seems a transformation by magic. To mention the various attractive buildings is impossible. Many banks and important commercial houses may be found here, buildings of the leading newspapers, the *Jornal do Commercio*, the *Jornal do Brazil*, the *O Paiz*, and conspicuous near the south end, the *National Library* and the *Art Museum* on the left, the *Municipal Theater* on the right, and at the very end on the right the *Monroe Palace*.

The *National Library*, called the most valuable in South America and, with more than 400,000 catalogued numbers, the largest south of the equator, is housed in a handsome building of the best modern equipment. This was designed and constructed by the Mayor, General Souza Aguiar, after an inspection of the libraries of Europe and America. It contains its own departments for printing and binding. The famous Ajuda Collection, which was brought over by Prince João

in 1806, when Napoleon's army invaded Portugal, was the nucleus. From the old Carmelite hospital in the rua Primeiro de Março it was moved to its own quarters in 1810, when it already numbered 60,000 volumes. All schools and periods of typographic art may here be found, examples of Johann Fust and Peter Schoeffer, Aldins and Plautius, Ibarra, Elshvers, and many others. A permanent exhibition has been arranged of Books, Manuscripts and Charts, Engravings and Prints, Medals and Coins. In the rarity of some of its treasures, if not in number, the collection compares with the famous ones of Europe: a perfect copy of the Mazarin Bible printed in 1462, the first from movable type, the first edition of the New Testament by Erasmus of Rotterdam, 1514, a *Novus Orbis Regionum* with map of Brazil, 1532, a Roycroft Bible, London 1557, and many other rarities. Among the 300 engravings and prints are works of Dürer, Cranach, Rubens, etc. With over 100,000 prints and above 30,000 (many rare) numismatic specimens, a treat is afforded to the specialist.

The reading room, where it should be, on the main floor, is furnished with comfortable leather-covered armchairs and individual desks. In the side galleries around the rotunda are arranged in glass cases many of the especial gems of the rare specimens. In the great stack rooms, I observed many books in English, noticing the names of Mark Twain, Macaulay, Dickens, and others. The finest editions of the various works in handsome bindings seem to have been selected.

The library is open from ten A. M. to nine P. M. with the usual exception of Sundays and holidays.

Other libraries which only the specialist will be likely to visit are the *Fluminense* with 90,000 volumes, on the Ouvidor, the *Libraries* of the Army, and of the Navy, that of the *Medical School* with 70,000 volumes, of the *Polytechnic* with 70,000, the *Senate Library*, the *Congressional*, the *Gabinete Portuguez de Leitura*, occupying a beautiful building in the rua Luis de Camões near San Francisco Square, the *Commerce Library* in the Stock Exchange Building, and others.

Next to the Bibliotheca Nacional on the Avenida is the *Escola de Bellas Artes*, the Art School and Museum. Again the collection of Prince João was the nucleus to which many



NATIONAL LIBRARY



SCHOOL OF FINE ARTS

accretions have been made by Government grant and by private donations. Among original works of the old masters of various schools which are here to be seen are canvases of Caracci, Correggio, Greuze, Guido Reni, Jordaens, Lucas, Murillo, Poussin, Rubens, Snyder, Jan Stein, Teniers, Tintoretto, Van Dyke, Velasquez, Veronese, Wouvermans, and many others, besides more than 100 never positively identified. Among fine pieces of sculpture is one by Rodolpho Bernadelli of *Christ and the Adulteress*. A large number of productions of Brazilian artists is also included in the collection, which is said to be the largest and most important in South America.

Opposite the Fine Arts Museum is the *Municipal Theater*, a splendid edifice, facing a small triangular park, with one side on the Avenida.

The theater, like the Colon in Buenos Aires, is fitted up with every modern improvement, mechanical and electrical devices above and below the stage, which seems almost as large as the auditorium, with rows upon rows of floor drops to give the depth desired. A power plant, an air filtering and cooling plant, and what is called the most beautiful restaurant in South America, minister to the comfort of the audience. The restaurant of Assyrian style in details follows Babylonian originals in the Louvre of Paris. The leather-covered armchairs in the auditorium, of unusual width and well spaced, are especially comfortable. The President, of course, is provided with an elegant box, communicating with private salon and dining-room on the floor below. Modelled after the Paris Opera House, though a trifle smaller, it is richly decorated. Designed and built by Dr. Francisco Oliveira Passos, son of the great Mayor Passos, during whose administration the grand transformation of the city was largely effected, the theater was inaugurated in July, 1909, with Rejane and an all star French company. It is now leased to an impresario who must produce each year a number of standard plays, some in Portuguese translation, and some plays by native dramatists, further encouraging national art by conducting a dramatic school. Visitors may be admitted at the rear entrance between ten and four on working days.

At the very end of the Avenue, not far from the Theater and close to the sea, with open space on every side, stands the *Monroe Palace*, which at the St. Louis Exposition served as the Brazilian headquarters, and here, in 1906, as the meeting place for the second Pan American Congress. It is of a rather florid type of architecture, the most ornate of the buildings on the Avenue.

The Monroe Palace has one entrance on the Avenida and one on the opposite side towards the *Passeio Publico*. This most ancient of the public gardens of Rio, founded in 1783, contains vegetation from this epoch, hence 130 years old. It has the usual beauties of tropical parks, trees, shrubbery, flower beds, and vines, also several statues, and a pretty building, entrance 1 milreis, housing a collection of native fishes. This *Marine Aquarium*, installed in 1904, has 20 sections with 35 different species; among these, flying fish, feather fish, turtles, moon fish, crabs, sea-horses, varieties of lobsters, and of marine plants. A pavilion, affording opportunity for rest and the purchase of refreshments, supplies also music and moving pictures. The garden, which is much frequented, was designed by a native artist, Valentina da Fonseca e Silva, more familiarly known as *mestre Valentim*. The artistic decoration includes two statues, Apollo and Mercury, the arms of Luiz de Vaseoncellos, then Viceroy, the bust in the fount of the jacarés, and two granite pyramids inscribed 1783, *A' saudade do Rio e Ao Amor do Publico*.

Busts of the poets, Gonçalves Dias, and Castro Alves, and of the journalist, Ferreira de Arango, founder of the *Gazeta de Noticias*, have been placed in the garden. At the main entrance is a gilded bronze medallion of Queen Maria and her consort, Dom Pedro III.

Among the important streets running from the Praça 15th of November across the Avenida, a little north of the Hotel Avenida, are the Assembléa leading to the Praça da Carioca, a short distance from the Avenue, and the rua 7th of September leading to the *Praça Tirandentes* farther west. The Garden contains an admirable statue, by the French sculptor Rochel, of Dom Pedro I, founder of the empire. Continuing in the same direction, one will reach the large and beautiful *Parque da Republica*, in a Praça or Square of the same name,

of unusual size for a park near the heart of the business section. Here are woods, lakes, and streams with aquatic birds, black and white swans, islands and rustic bridges, a grotto with a pretty cascade, 66,000 varieties of plants, many birds and animals, and some statuary.

All of the parks are characterized by luxuriant tropical verdure.

On the Praça, south of the Park, is an immense building, the Firemen's Barracks.

To the northwest, facing a paved square, is the great *Station* of the *Central Railway*, with tracks running into three different states and to forty or more cities, including São Paulo. Its revenue is more than \$10,000,000 a year. On another side of the Praça facing the Park is the Senate House, and the *Mint* with an imposing façade and some fine ornamentation in bronze. Other buildings on the sides of the Praça are the Ministry of War, the Barracks, the Normal School, the Foreign Office, the Law and the Medical Schools, and the National School of Music.

From the northwest corner of the Park two parallel streets run westward, the Visconde de Itauna and Senador Eusebio, to the Square Onze de Junho, whence they continue at the side of the *Canal do Mangue*, forming a grand boulevard with two rows of royal palms on each side. This double and channeled avenue has one sharp bend, turning in the direction of the new docks, where the canal empties into the harbor. It is a mile and a half in length, has two tracks for electric cars, paved ways for wagons, and broad asphalt for automobiles, to which the central stream of water with its massive stone embankments and the superb rows of palms add an unusual beauty.

The *Zoological Garden*, admission 1\$000 is reached by electric of the Villa Isabel line from the Praça 15 de Novembro, a pleasant ride. Some interesting animals are on view, but if time is limited, it may be better employed elsewhere.

From the same Square, cars marked São Christovão go to the *National Museum* in the *Quinta de Boa Vista*. The Quinta, a fine large park, deserves a visit, the Aquarium (free) also, even should the Museum be closed, as has long been the case, for the purpose of extensive alterations. The Museum,

with other objects has a good collection of archæological and ethnographical specimens. A famous meteorite of unusual size, named Bendigo, was formerly in the vestibule. The great building was earlier the winter palace of Dom Pedro II. It has been proposed to transfer the Zoological Garden to this handsome park.

The various hills remaining in the center of the city, a few have been completely leveled, give variety and picturesqueness to its topography, although interfering somewhat with ease of locomotion and traffic. Of considerable height and steepness, they are slender, so that the way around is not over long; thus in the opinion of the tourist who has an eye for scenic beauty they are not to be regretted. The energetic person with a little time to spare should enjoy the ascent of the four hills which are near the Avenida, and of one or two of those along the Beira Mar. Near the south end of the Avenue, a little back of the Hotel Avenida, is the *Santo Antonio* hill surmounted by a convent of that name. The main entrance is from the rua 13th of May, in a narrow passage between the Santa Theresa Tramway Station and the Government Printing Office on the left. The ancient and massive structure of the *Convent*, built rather to defy the ravages of time than to excite admiration for its beauty, has outside walls on the ground floor 4 feet 9 inches in thickness. The vast corridors are poorly lighted. Begun June 4, 1608, the construction was finished in 1615. The hill, originally Morro do Carmo, later took its name from the convent. Of the Franciscan Order, the convent is poor, but the fine sacristy is worth visiting. Here is antique and artistic furniture, such as is rarely seen, carved from jacarandá, one of Brazil's most valuable woods. Here, too, is a remarkable wainscoting of blue tile, representing incidents in the life of St. Anthony, paintings on wood, a staff done in gold and precious stones presented by the Prince Regent, another from the Governor of Sacramento, now Uruguay, and other curiosities. In 1855 an imperial decree suspended the novitiate of religious orders; by 1886 but one member of the community remained; in 1889, with the establishment of the Republic, religious liberty was ordained, other friars were admitted, and the work of restoration began. In a large



AVENIDA DO MANGUE

saloon of the convent is a stone slab marking the burial place of John Forbes Skellater, native of Scotland, who served the Kings of Portugal as General and Councillor, accompanying H. R. H. to Rio de Janeiro, where he died April 8, 1808, at the age of 76. In an old chapel of the cloisters is a tomb containing the remains of the Prince Pedro Alfonso, son of the Emperor, Dom Pedro II. Several pictures by unknown artists remain from ancient days.

The hill on the other side of the Avenue, also south of rua Assembléa is *Castello*, at the top of which is the Astronomical Observatory with ruins of an ancient church. The easy climb by a narrow paved roadway is well worth making for the delightful view from the summit of the city and harbor below, and the more distant mountains in the rear.

Near the foot of Castello on the east side, facing the bay on the Praia de Santa Luzia is *Misericórdia Hospital*, largest of the kind in South America: a great institution with 57 doctors, 88 nurses and many assistants. In 1910, 12,171 cases were treated besides 154,600 outdoor patients. Among other numerous and notable philanthropic institutions is the admirable Institute of Protection and Assistance to Infants, on rua Visconde do Rio Branco 12, founded by Dr. Moncorvo Jr. in 1901; accomplishing a great work in the surgical and medical treatment of children and mothers, and in propagating information as to hygiene. It received a Grand Prize at the International Exhibition at Rome 1912. Equally if not more distinguished is the Pathological Institute Oswaldo Cruz, also founded in 1901. This, outside the city at Maquinhos, reached by rail or water in 45 minutes, is called the most completely equipped in the world for such work: the study of disease germs, the preparation of serums, etc. Its publications number nearly 100. The smallpox microbe was here discovered.

Near the north end of the Avenida on the same side as the Castello is the *São Bento* hill, at the extremity of the rua Primeiro de Março, the enclosure of the Benedictine Monastery above being entered by a large gateway at the bottom of a flight of stone steps. Founded in 1591, the existing church was built between 1633 and 1642; the present monastery was begun in 1652. During the French invasion in 1711, the

buildings were seriously damaged, and the Order contributed liberally for the French to leave the town. Nearly half the building was in 1732 destroyed by fire. The property, till 1827 belonging to the Portuguese Congregation, was then transferred to the newly organized Brazilian Congregation. In 1909 São Bento became *Abbadia Nullius*, equivalent to an Archbishopric. It had, in 1912, 20 monks in residence and 6 in the Rio Branco Mission to Indians in the Amazon region. The monastery has, since 1858, maintained a free school for boys, primary and secondary, with 400 pupils now in attendance, and with 500 in a night school. Lay professors assist and many distinguished men have here received their early education. The Order is very wealthy, owning much property in the middle of the city. It formerly owned the site of the Marine Arsenal and the Ilha das Cobras, which was purchased in 1589 by the founder of the monastery for 15 milreis, about \$5.00. In the revolt of the Naval Brigade, December, 1910, on the Cobras Island, the Government forces made use of the monastery, which suffered seriously from the return fire. The church, rich in carved and gilded decorations, is worth a visit. It contains some rare furniture, and an ancient organ valuable only as a relic. The sacristy and corridors preserve a large number of old paintings. One of the cells, containing fine specimens of wood work, with a bed formerly used by D. João VI, is for the especial use of the Papal Nuncio when he descends for a few days from his residence in Petropolis. The library of 15,000 volumes comprises many valuable theological works, both in printing and in manuscript.

On the west side of the Avenue, near the same north end, is the *Morro da Conceição*, easily ascended from rua Acre by a paved way with steps. There are many dwellings on this hill, with the *Palace* of the *Cardinal Archbishop* at the top. He prefers, however, to live below in a residence in the rua do Bispo. Offices adjoining the Cathedral, in the 7th of September street, are used for the official work. Adjoining the Palace grounds on the hill top is the *Fortaleza*, built in 1715. Formerly one of the chief points in the defense of the city it is now used as a barracks for an infantry regiment. The watch towers, old sentry boxes, and the dungeons are of

interest. The last have been in use, even since the founding of the Republic, for the imprisonment of political offenders; in 1893-94, British subjects, among others, were here immured. The view from this hill-top over the city is the most comprehensive to be obtained from any central point.

CHAPTER XXXI

RIO DE JANEIRO—CONCLUDED

Too long, mayhap, have we lingered in the heart of the city, longer I fancy than any tourist will do, despite the attractions in the busy marts of trade, and the stately edifices devoted to governmental, artistic, and intellectual purposes. The great charm of the city, the feature which makes it incomparable among the capitals of the world, is the number of delightful excursions practicable to its enchanting suburbs. Some of these may be visited by electric car or automobile, as the length of one's purse prescribes, others by boat, and one by cog railway.

Most persons will be tempted to improve the very first afternoon by a ride along the front of the bay, on the unrivaled *Beira Mar*, from the Monroe Palace on the Avenida to the foot of the Pão do Assucar, a ride without parallel, even on the shores of the Mediterranean. This magnificent boulevard invites also to a promenade, for a broad walk guarded by a handsome railing tops the massive sea wall, which rises 15 feet above the wave-sprinkled rocks below. Rarely, indeed, the waves rise higher. July 12th, 1911, a heavy wind blowing from the south not only dashed breakers high above the wall, but with these sent stones weighing a ton over upon the boulevard. Next to the promenade come two wide asphalt spaces, separated by a strip of grass and a row of trees, for automobiles going in opposite directions, thronged towards evening with swiftly moving machines. A garden strip of varying width follows, beautiful shrubbery, brilliant coleas, and other plants with leaves of varied hue, gorgeous red salvias, geraniums, and other showy flowers. Now comes the wide paved street with ample space for ordinary vehicles and for the double tracks of the electric cars.

A few minutes from the Monroe Palace, and almost in front of the Pensão Suissa is the Praça da Gloria where Cattete street branches from the Beira Mar. The very pretty Garden contains two notable monuments: one of these to Pedro Alvares Cabral, discoverer of Brazil, by Rodolpho Bernadelli, Director of the School of Fine Arts. This monument inaugurated in 1900, the fourth centenary of the Discovery, represents with Cabral the chronicler, Pero Vaz Caminha, and the Franciscan, Henrique de Coimbra, who celebrated the first mass on the soil of South America. The other monument, dedicated in 1902, is a statue of Visconde do Rio Branco by the French sculptor, Charpentier. The ascent of the Gloria hill close by is worth while for the splendid panorama from the summit, if not for the little church above where on the 15th of August is a festival.

Beyond the Gloria hill are finer residences with pretty gardens, distracting attention from the view of the Sugar Loaf in front, the silvery waters on the left, the city of Nietheroy on the opposite side of the bay, and the curving inlets of both shores. On account of a projecting hill the car tracks leave the water's edge for a space, passing back to the *Largo do Machado*, where the offices of the railway are situated, the place to go for lost articles. After passing the Hotel dos Estrangeiros, the boulevard is soon regained on the *Botafogo Bay*, a lovely geometrical curve. Again leaving the shore the car marked *Ministro de Agricultura* alone returns to the *Praia de Saudade*, on which the great *Hospital for the Insane* is passed, the *Institute Benjamin Constant for the Blind*, and the imposing building of the *Ministry of Agriculture*, the cars at length pausing in front of the *Military School Building*, which stands by the ocean shore; we have now passed beyond the splendid Sugar Loaf, so that in the rear of the School Building we should find the *Praia Vermelha*, a beach on the great ocean. An *Aerial Railway* now serves for a trip to the tip top of the pinnacle, *Pão do Assucar*, whence a delightful view is obtained of city, bay, and ocean. The same *Praia Vermelha* car passes the base station whence an electric basket cable car accommodating twenty persons goes, first to the *Morro da Urea*, return ticket 2\$000, then on to the top of the *Pão do Assucar*, return ticket probably 4\$000. The journey

to the top is made in twelve minutes. The distance is nearly a mile.

Other rides partly along the front, or on Cattete street parallel to the Beira Mar, should be taken to the various suburban ocean beaches of *Leme*, *Copacabana*, *Ipanema*, and *Gavea*, backed by picturesque hills, through which a tunnel or two has been bored for more direct access. Some of the beaches, though rather dangerous for bathing, are more or less patronized. Many people wander along the shore, or in pavilions regale themselves with beer or coffee. Villas of the wealthy and a sprinkling of poorer houses, with several hotels and restaurants, show provision for all classes. Everywhere in the residential districts outside of the more crowded central portion, attention will be continually drawn to the charming homes, some of quite palatial dimensions and elegance, the majority more modest but generally with some pretty ornamentation, all apparently freshly painted in varied and delicate shades of color, pink, blue, green, lavender, pearl, buff, Alice blue, etc., embowered among vines, shrubbery, and palms: an unceasing source of pleasure.

On the way to the beaches by the rua Cattete, before reaching the Strangers' Hotel, the *President's Palace* may be observed on the left. The large garden extends through to the boulevard along the Praia de Flamengo, but the entrance is from Cattete. The exterior of the Palace, which was constructed by the Baron of Nova Friburgo and later purchased by the Government, is not noteworthy, but the interior has magnificent decorations; the garden would be a fitting accessory of a royal palace. Next to the Palace is the beautiful school building, Rodriguez Alves, a suitable monument to the great President of Brazil, in whose administration was inaugurated the tremendous undertaking by which the city has been transformed.

Not far from the Hotel Estrangeiros, a beautiful avenue lined with royal palms, half a mile long, leads to a fine mansion, which in 1911 was the residence of the President.

In a long afternoon of four or five hours the entire circuit of the city may be made by automobile along the Beira Mar on the shore of the bay, then past the ocean beaches to the mountains and by a splendid road along the mountain-side



RESIDENCE OF THE PRESIDENT



BOTANICAL GARDENS

past Gavea and Tijuca, thence across to the waterfront, and by the docks returning to the Avenida Central; a circuit with varied panorama such as no other city of the world affords, to which an entire day might better be devoted.

The *Botanical Garden*, long celebrated as possessing the finest collection of tropical plants among the parks of the world, was founded in 1808 by Dom João VI when Prince Regent of Portugal. At the Avenida Station, a car marked Gavea may be taken about once in ten minutes. The route is at first a familiar one, near the shore of the bay, but turns at length to the west, passing presently under the steep walls of Corcovado on the right and near the shore of a considerable lake, the Lagõa Rodrigues de Freitas on the left, a ride for which the three-quarters of an hour required is none too long. Within the gateway, flanked by small office buildings, one is confronted by a splendid avenue of superb palms, 150 in number, extending in a straight line nearly half a mile. The tree trunks, a yard in diameter at the base, are straight shafts 75 feet high, ere they are topped by their leafage crown. Some distance up, this avenue is crossed by another of 140 palms, a fountain adorning the square of intersection. These palms, with all those forming colonnades in other parts of the city, are descendants of the ancient tree which was planted by D. João VI. The story goes that some Brazilian officers, shipwrecked, were carried to the Isle of France, where was a fine botanical garden. One of the officers, Luiz de Abreu, after gaining possession of several choice specimens, managed to escape with them. Returning to Brazil he presented them to Dom João, who, transferring them to the Garden, planted with his own hands the seed of the *Royal Palm*. The tree still standing, 130 feet high, apparently destined to flourish for some time longer, is marked by an inscription, and will be pointed out by an attendant if overlooked. It is not, of course, in any of the rows. Besides hundreds of varieties of Brazilian plants, the Garden contains as many from all parts of the world; it maintains close relations with other Gardens, sending to them hundreds of thousands of seeds, as well as making extensive distribution in various parts of Brazil. A delightful section at the left of the entrance is called the *Bamboo Salon*, where a walk under the feathery

archway recalls the aisle of a Gothic cathedral. Of great interest is the *traveler's tree*, somewhat resembling a banana plant, of which the sap is like pure cold water. The gentleman who showed me about, kindly cut the stalk with his knife. I drank as the sap spouted forth, and found it indistinguishable from clear water. If the tree would grow in desert regions, what a godsend to the thirsty traveler! The *victoria regia* with its great leaves, four or five feet in diameter floating on the water is always noteworthy, even if it is not the flowering season, there May or June. Naturally rubber trees of many varieties are to be seen, coffee shrubs, tea plants, and others in profusion, both useful and beautiful, a wealth of vines, but fewer orchids, at least in blossom, than I had hoped. The *candelabra tree*, so called from its shape, and the *cow tree*, which supplies a kind of milk better for making cement than for drinking, are of interest. An especial curiosity is one tree growing inside of another, the trunk of the palm being almost completely surrounded by the trunk of another tree of entirely different character, both trees now 30 or 40 feet high.

A number of pretty pavilions, a lake, grottoes, and cascades contribute to adorn the Garden, also several monuments and statues. One of the monuments is in memory of the real founder of the Garden, *Frei Leandro do Sacramento*, Professor of Botany in the Faculty of Medicine, a distinguished scholar, who on his death in 1829 left the Garden in a flourishing condition. At the end of the central avenue of palms, the monument, *Dea Palmaris*, was inaugurated in 1906. There are various statues of nymphs, a temple of Nike, a Belvedere, a colonial portico, and the *first statue ever cast in Brazil*, this in 1783 by Valentim da Fonseca e Silva. In one of the buildings by the gate is a *herbarium* of great value, as also a library. Even unscientific persons with no especial interest in botany may enjoy a long afternoon wandering in the delightful walks, the charm of which is increased by the wooded steeps and grim cliffs of Corcovado just above, seeing here the side of Corcovado precisely opposite to the one visible from the center of the city. One may leave the Garden in time to continue the short distance to the end of the line to Gavea, where there is a noted spring of water of excellent

quality. From a spot called Boa Vista, a short climb, the panorama is superb. The headlands, Dous Irmãos, are at the left, the shores ever beaten by angry waves; in front is the broad ocean dotted with islands, one named Rosa bearing a lighthouse; on the right imposing *Gavea*, on whose face near the summit may be distinguished lines believed to have been traced by some primitive people. The name *Gavea*, meaning topsail, is derived from the shape of the summit. Its ascent is possible from the side towards Tijuca and has several times been made.

Corcovado. Most delightful to many of all the days to be spent at Rio will be that which is devoted to the *Ascent of Corcovado*; nor should it long be postponed. The first clear day or afternoon should be improved, as at some seasons clouds are frequent. Even setting out with a cloudless sky, one may find the goal shrouded in mist, or spread out below a mantle of softest sheen concealing in part or whole the glorious prospect beneath. There is a choice of two routes to the summit: both I strongly recommend; every one should go twice; but with time so limited that a single trip may be made it is desirable to go one way and return the other. The Sylvestre route begins by electric car, starting every half hour from the Largo da Carioca back of the Avenida Hotel. The other, longer or shorter, according to the point of departure, is all by cog-wheeled railway; but the base station is 35 or 40 minutes from the Avenida. One takes here or farther out a car marked Cosme Velho or Larangeiras to the pretty station among the Santa Theresa hills, passing on the way the familiar Estrangeiros and Largo Machado, there turning to the right on Larangeiras, a street as yet unfamiliar. Near the end of the line on the left is the station, return ticket 3 milreis, where one enters a car open at the sides with sufficiently comfortable seats if you face upwards. The track, one meter wide, about two miles long, crosses the valley of the Sylvestre stream on an iron viaduct of three arches, each 80 feet wide, supported on iron pillars with a masonry base, then enters a deep trench, later crossing two more bridges.

At the first station, *Sylvestre*, those board the train who have come by electrics to this point. The latter, after a few

roads of steep grade from Carioca, wind along the side of San Antonio Hill in gradual ascent, then cross on the picturesque double arches of the old viaduct to the outlying hill of the Santa Thereza ridge. Swiftly speeds the car affording but fleeting glimpses of the busy streets and the houses below. Winding along the hillside, soon passing the International Hotel, with many level stretches and moderate inclines, the outlook above or below is enchanting. Any description must fall far short of the reality. The conjunction of a great city with picturesque scenery, pellucid bays, ragged cliffs, and tropical vegetation is unparalleled. One sits enthralled with the vision of loveliness. One's entire vocabulary of adjectives such as exquisite, entrancing, magnificent, sublime, crowd upon the mind. A short distance away towers the massive Sugar Loaf, its cliffs so steep and smooth that apparently even a fly would find no foothold, unless with a liberal supply of Spalding's glue upon his little toes. My cry was not "O for the wings of a dove!" but for the pen of my gifted friends, Aked or Gifford, to attempt the glowing description the scenes deserve. Here are trees with great bunches of yellow flowers, somewhat resembling wistaria, but with a very artificial look. Many trees bear large scarlet flowers. One below is covered with white blossoms. Pretty villas and gardens are passed, the dwellings, pink, blue, green, and terra cotta. In bright sunshine smoked glasses may seem desirable to eyes not especially strong. As we skirt the hillside in many curves, the city below is now on our right, the gleaming bay, and curving shore; the next moment the steep slopes or cliffs above; and now we move through a dense and quiet forest. A good carriage road is here by the side of the track. A happy couple is occasionally seen strolling on a sequestered path. In January it was too warm to enjoy a climb, but a leisurely descent would at any time be a pleasure. In winter, June, July, and August, the ascent would be equally agreeable, and the opportunity to pause and enjoy the charming vistas no one could fail to appreciate.

At Sylvestre, about 700 feet altitude, where the transfer is made to the cog-wheeled railway, there is a little hotel where a cup of tea may be enjoyed and a short walk taken, unless close connection is made. In this case you must run across



CORCOVADO FROM THE BOULEVARD BEIRA MAR



THROUGH THE CLOUDS, FROM CORCOVADO

the track to the booth where tickets are sold, buying for the round trip unless minded to walk down; an excellent idea, as the time allowed above is short. Descending on foot to Sylvestre a car may there be taken every half-hour. The hours of the train on the cog railway should be carefully investigated, as they are few, and vary with the season; on week days formerly 10 and 2, on Sundays nearly every hour but the last descending at 5. Now on the cog-wheeled road, the grade is at times so heavy that if riding backwards you must brace or hang on, lest you slip from the seat. The train is run by electricity with four cables and an engine. Six kinds of brakes may be relied upon in case of accident; they never occur on this line, but occasionally on the tramway. Thick woods and a tangle of vines now mostly shut out the distant prospect, but these are fascinating. Mosses, ferns, and lichens, forest palms, tendril-draped trees with every shade of green, orchids, begonias, and other blossoms, trickling waters, narrow forest paths, sudden glimpses of the shimmering bay, of dark tree-tops, of massive cliffs below, or of craggy peak above, make every moment a delight. At the station *Paneiras*, alt., 1500 feet, is the Hotel Corcovado, with restaurant service at all hours and comfortable rooms, a resort for convalescents and others. It has a temperature 15° or 18° lower than in the city and delightful shady walks. At a little distance a clearing affords a wonderful outlook. The track ends at the foot of a cliff whence a good path of rather steep grade leads to the summit 100 feet above, crowned by the usual pavilion. This stands quite 2200 feet above the surface of the bay. One hardly pauses here, but descending a few steps goes on to the very end, the brink of the perpendicular cliff on the south side, with a sheer drop of 1700 feet, well protected by a substantial wall with a seat for the feeble or the loiterer. And who would not loiter here, with this beautiful vision spread out beneath! A panorama of surpassing loveliness! Oh, read Miss Cameron's *Involuntary Chaperone!* and you may gain some small idea of the enchanting scenes. In afternoon light, in sunset glow, in the quiet evening with the twinkling lights below and the serene moon above, this is a paradise for lovers, a fairy land for all.

The view from *Tijuca* more beautiful! Who at Corco-

vado can believe it? Not I! But so some have said. Therefore to Tijuca must one go if possible. The electric cars marked Tijuca, which run from Praça 15th of November along rua Assembléa to the suburb, may be taken for the excursion. The ride is through a very different section, by the Canal do Mangue, then through clean streets, lined by comfortable dwellings of the middle class, some more pretentious with pretty gardens, nearly all painted in delicate shades of gay colors. In the really suburban section are many fine villas, and after a gradual ascent among the hills one descends 6 miles from the Avenida, at a park, alt. 1000 ft., called *Boa Vista*, on one side of which is a hotel; also an establishment where saddle horses may be procured, perchance an automobile, for the continuance of the journey. These are rather expensive; a carriage for an hour costs 20 milreis, nearly \$7.00, an auto of course more. Walks, however, may be taken to many pretty spots. A few steps from the Square is a charming outlook over city and bay. At the farther side of the Square begins the Tijuca forest, and following the road one soon reaches (perhaps ten minutes) a picturesque little *cascade*. This road may be pursued on foot or horseback in 3 or 4 hours to the top of the mountain; alt. 3300 feet, from which is the superior view above mentioned. Other pretty spots to be visited in a drive of two or three hours are the *Grotto of Paul and Virginia*, the *Grand Cascade*, the *Chinese View*, the *Emperor's Table*, the *Excelsior*, the *Solidão*, etc. The *Furnas* at a distance of two miles is a fantastic arrangement of rocks and boulders, where an interesting garden has been established. The road which passes the Vista Chinezinha and the Emperor's Table leads down to the Botanical Garden through the rua Dona Castorina. Best of all is to make a day of it by automobile from the city, ascending the peak on foot or horseback, visiting all the points of interest, and taking the glorious ride around by Gavea and the Botanical Gardens on the return.

PETROPOLIS

HOTELS. Europa, Rio de Janeiro (German), Pensão Central, expensive. Braganza Hotel, Meyer's Pension, moderate.

An excursion to *Petropolis* (return ticket 4\$) should not be

omitted, a city of 25,000, the residence of the diplomats, formerly the summer home of the Emperor. Once it was necessary to cross the bay to Mauá to take the train; the road from this point to the foot of the mountains, opened in 1856, is the oldest in Brazil. While the steamboat ride was agreeable, it is more convenient to take the train at the Leopoldina Railway Station in the city, rather far out, indeed; and at least three-quarters of an hour should be allowed to reach it. Almost, in spite of a sharp run, I lost my train, which my companion did quite. After some miles over the plain, the rack and pinion system is employed for the climb, almost to the city; when ordinary motors are again used. The ascent is delightful, with an ever charming outlook, better perhaps on the right, but there should be observation cars in order to look both ways at once. The sea is occasionally visible, oftener only the luxuriant vegetation, trailing vines, feathery ferns, brilliant blossoms, great trees, splendid rocks, and mountain streams. An occasional factory is rather a surprise, but with all this water power, why not? This Serra da Estrella is a part of the Organ Mts. and of the Serra do Mar or Coast Range of Brazil. Among the hills around, orchid hunters find many treasures. Petropolis, in the social season from December to May, is a resort of wealth and fashion, a scene of gayety, the many beautiful homes filled with guests. Founded in 1845 as an agricultural colony by 2000 Germans, it became the headquarters of the Diplomatic Corps on account of the yellow fever epidemics at Rio. The residence of twenty foreign diplomats has made the place important for its size. Now that the sanitary conditions of Rio are of the very best it is possible that the diplomats may resume residence in the capital below. A pretty and unusual feature of Petropolis is the stream flowing in several of the principal streets, crossed by graceful bridges of wood or of iron, with stone embankments partially vine-clad, and beautiful overhanging trees. There are delightful drives, both in the town and in the mountainous region about. The wide streets of the town, often fringed with magnolias, are bordered by many handsome residences amid lawns and gardens with rich tropical verdure. A bronze monument to Pedro II was dedicated February, 1911. The American Embassy is housed in a fine

old mansion on beautiful grounds. The former summer residence of Dom Pedro II, property of the Countess d'Eu, is now a College of St. Vincent de Paul. The city has unusual educational advantages and many commercial enterprises. There is much social gayety in the season, but during the months of the rainy weather the fashionables depart. The City Hall is noted as the best in the state.

Another city on the mountains, of slightly greater elevation, is *Nova Friburgo*, three hours from Nictheroy. With an elevation of about 3000 feet it enjoys a perfect climate. The oldest immigrant colony in Brazil, it was founded by 1700 Swiss in 1819. This also is a famous summer resort and is the center of a productive coffee district.

Another interesting mountain city is *Therezopolis*, also 3000 feet above the sea, commanding delightful views of the ravines and cascades of the Organ Mts. and of the beautiful bay far below.

An excursion to *Nictheroy*, the capital of the State of Rio de Janeiro, should not be omitted. It is easily made from the Caes Pharoux, by ferry every half-hour. With a population of 35,000, it is a nice quiet town, with well paved streets and pretty squares. From the ferry landing electric cars may be taken to the charming beaches of *Icarahy* and *Sacco do São Francisco*, the latter with a beach rivaling Trouville; the ride around by one of the promontories is thoroughly delightful. The return may be made through the town of Nictheroy, which has some handsome public buildings.

Equally if not more desirable is a sail into the inner harbor. From Caes Pharoux boats go four times daily to the Island Paquetá, also to the Governador; (fare to either 500 *reis* each way). The former island is especially picturesque, with charming embowered chalets. On Sunday afternoons, a three hours' sail may be taken; fare 1\$500.



UNITED STATES EMBASSY, PETROPOLIS



STREET WITH RIVER

CHAPTER XXXII

NORTHERN BRAZIL—HOMEWARD

THE large majority of tourists will embark at Rio on one of the fine large steamers of the Lamport and Holt Line for New York. Return may also be made by way of England on a Royal Mail boat. A few may desire a more extended acquaintance with Brazil. Some facts are therefore presented in regard to other States of this immense Republic and the facilities for visiting them.

Minas Geraes. One inclined to journey into the interior, to the rich gold and diamond region in the State of *Minas Geraes*, may go by the Central Railway 400 miles north to the capital of Minas, *Bello Horizonte*, a made-to-order city, not twenty years of age, but with a population of 30,000, already a fine town for its size. While this State has no sea-board, no rubber, and no city of 50,000 inhabitants, it has a larger population than any other State of Brazil and than most of the countries of South America. This is due to its good climate and excellent waters, as well as to its rich resources. The author Diaz says: "In this State what doesn't hide gold contains iron; what does not contain coal spreads diamonds." Here for a century 80,000 men toiled to supply gold to the kings of Portugal. Discovered in 1699, the output of the *gold mines* at the middle of the eighteenth century was at its height. Five thousand pounds weight is said to have been panned in one year in the area of one square mile; in another place 100 pounds in one night; 360,000 pounds weight were registered in Rio in 1792. The entire output has been about one billion dollars. In the nineteenth century less was produced on account of a heavy tax, new methods, and uncertainty as to property rights and mining laws. At present there is a revival and a good outlook. The oldest producing gold mine in the world is said to be the

Morro Velho, between Ouro Preto and Bello Horizonte, yielding one ounce to the ton and 80,000 ounces a year.

The *diamond mines* of Jequitinhonha Valley, famous for two centuries, were discovered in 1729. The Regent diamond, weighing nearly an ounce, found by three convicts in 1791, secured their pardon. The Estrella do Sul, now belonging to the Rajah of Baroda, picked up by a slave who gave it for his freedom, was the highest ransom ever paid for liberty. Weighing uncut 250 carats, about half that when cut, it is worth \$15,000,000. The center of the industry is the town *Diamantina* (population 10,000), 600 miles from Rio. Black diamonds are found, also amethysts, tourmaline, topaz, aquamarines, garnets, chrysolites, etc., in many places.

Ouro Preto, the center of the manganese industry, yields annually 250,000 tons of 55 per cent ore. Iron, found in every part of Minas, for lack of fuel, is not exploited. Platinum has been found and there is a great variety of granite and marble, agates, onyx, and rock crystal, mica, graphite, cinnabar, and asbestos. Ouro Preto, the former capital, has a mining school, organized in 1903, said to be one of the best in the world, with instruction free; the museum contains a rare collection. The State is thought to have a future rivaling that of Australia and Kimberley.

The old capital, of which Diaz says: "In six squares everything is in the horizontal plan, but the 52 streets and lanes go through tortuous and accidented places as if they were acrobats," was at length deemed unsuitable; the State was investigated for a new one; the site of a hamlet in a beautiful valley was chosen, and a branch line was built 10 miles from the Central Railway. In 1894 private houses began to be erected. *Bello Horizonte* has fine wide streets, with arborization said to be the most artistic of any South American city. It has water supply, sewerage, illumination, and electric tramways, of the best type, a *Government Palace* which cost half a million, the finest of the State buildings of Brazil, the *Department of the Interior*, of *Finance*, and of *Agriculture*, each with handsome buildings, also the *City Hospital*. A small river with pretty cascades running through the valley forms the vertebra of a beautiful park, which with great trees, shrubs, and vines, a broad driveway, and pic-

turesque paths rivals in extent and natural beauty all others in Brazil.

An *Agricultural School* with a model farm is an important educational feature on account of the great fertility of the region. Sugar cane, corn, rice, bananas, tobacco, fruits, cotton, cereals, and many other things are here cultivated, with coffee as the chief product, the State being second to São Paulo in its culture. A concession was made to a North American Company for growing hemp and other fibres, one million trees to be planted within four years. Viticulture and the silk worm industry are suitable to the region. Vast pasture lands support great herds of cattle, nearly 300,000,000 head being exported in a single year. The dairy produce of butter, cheese, and milk, is very important, and eggs also. It is thus evident that Brazil possesses other industries beside rubber and coffee, and regions with agreeable climate. The San Francisco River flowing north through this section, while navigable at intervals, has a series of cascades, among the most picturesque in the world. Also there are famous mineral springs at Caxambu, altitude 3000 ft., with waters resembling those of Baden and Spa, with chalets, hotels, and sanatoria, in summer crowded with guests; and other springs in various other resorts.

The next *Coast State* to Rio is *Espirito Santo*, though small, the third coffee producer, raising also sugar cane, rice, and splendid tropical woods; a good climate up on the plateau. The capital and seaport, Victoria (20,000 pop.), has an excellent harbor, now being improved with docks, warehouses, etc., soon to be a port of call for large steamers. The next State, Bahia, will be mentioned later in the chapter.

Following Bahia is *Sergipe*, smallest of the States (a little larger than Maryland), 15,000 square miles, but the most thickly settled. Another small State is *Alagoas*; then comes the large and important *Pernambuco*, its capital so called, but more properly Recife; with its population of 150,000, the fourth city of Brazil, it is of great commercial importance. The name Recife arises from a substantial reef off shore forming a fine natural breakwater, to which the Dutch made some artificial addition, also erecting at its extremity a strong lighthouse tower, the light visible for 20 miles. The city, built on

marshy ground, by quays and filling in redeemed from the sea, from its canals and peninsulas, is called the Brazilian Venice. Founded in 1536 by Duarte Coelho, it was in the seventeenth century occupied many years by the Dutch, who were finally expelled in 1654 by the patriotic Portuguese. From the pretty bridges are many lovely panoramas. Several fine markets, two theaters, a handsome Congress Hall, and the Governor's Palace on the foundations of that of the Prince of Nassau facing the Praça de Republica are noteworthy. Two handsome churches are those of Nossa Senhora da Penha of the Corinthian order of architecture and the Boa Vista. The chief exports are cotton and sugar; the imports exceed those of any Brazilian city except Rio.

The next State on the north is *Parahyba*, reputed to have vast mineral wealth of coal, iron, gold, precious stones, etc., as yet lying tranquil in the soil. Then comes *Rio Grande do Norte*, whose enormous saline deposits along the shore partly compensate for its barren stretches of land and frequent droughts. The following state, *Ceará*, is closely connected with the rubber industry, for the reason that on account of the barren sands along the coast, and the inland droughts the male portion of the inhabitants is in large numbers driven to the rubber districts of Amazonas. Seasons not visited by drought are characterized by immense crops and bountiful dairy products. *Fortaleza*, the capital, with over 50,000 inhabitants, among other nice buildings possesses a great public market of cast-iron. Waterworks, planned on a large scale to alleviate the effects of the droughts, will be highly beneficial.

The adjoining state of *Piauhy*, with similar low and melancholy shores, also suffers from lack of rain. A town is spoken of as "having taken the name of a river that was so poor it ought not to have one to give away." *Maranhão*, the last state before reaching *Pará* and the Amazon, with a large population of negroes, like Bahia, and of Indians in their primitive condition, has as its capital *San Luiz*, a city founded by the French, and, like Bahia, noted for its literary taste and culture. An indication of this is that the squares, in other cities named after military events and heroes, are here called after poets and other writers.

PARÁ AND THE AMAZON

The great Amazon River, we all know, is the largest in the world, yet its immensity is hardly realized. In size of basin and volume of water it far exceeds the Mississippi. For a distance of 180 miles from shore the Atlantic is freshened by its waters, which vary in depth in the estuary from 90 to 900 feet. Among its 1100 tributaries, great and small, there are seven more than 1000 miles long, not counting the Marañon and Ucayali, by which it is formed. One, the Madeira River, has a length of 3000 miles. In the great region which it drains there are 1200 varieties of birds and 8000 animals not found elsewhere, to say nothing of the plants. The soil is so rich that corn is returned 800 fold.

The best time to visit the Upper Amazon is in the dryer season, from June to the middle of October, or in January; the worst is from February to June. The climate of this section is attractive only to those who enjoy heat and rain; the heat is not excessive, but continuous; the rain is often 200 inches annually. Still the climate is called fairly healthy for the most part, with small sections very bad.

Pará, the most important in wealth, population, and commerce of the northern States of Brazil, is a name familiar to all, to many simply as rubber, to others rather as a city than a State: improperly so indeed, as the city by its residents is termed Belem. Founded at the mouth of the Amazon in January, 1616, it is younger than the other important coast cities, while the State, formerly a part of Maranhão, is little more than a century old. The date of July 31, 1867, when the great river, previously closed to all but Brazilian steamers, was opened to the navigation of the world, is that of the beginning of Belem's prosperity and wonderful growth. To-day a city of 150,000, it lies on the edge of a tranquil lagoon called Guarajá Bay, formed by the Pará River, one of the several mouths of the great Amazon. Along the city front is a forest of masts and smokestacks, and vessels of every size and character pass to and fro. Fine docks and warehouses have recently been constructed, the work, begun in 1907, to be continued by the Port of Pará Co., according to the requirements which are rapidly increasing, since facilities must ulti-

mately be provided for a traffic from an area of the more than three million square miles embraced in the Amazon Valley. A channel 30 feet deep leading from the outer river to the port is marked by 26 modern buoys, illumined by acetylene gas, with lights of 120-candle power intensified by a lens. The port works are equal to the best at Liverpool and Hamburg, having three-quarters of a mile of quay wall with water 30 feet deep for ocean steamers, 722 feet of wall with 12 feet of water for river steamers, and 1500 feet more for smaller boats with 9 feet 6 inches of water. The wall of huge blocks of concrete is of the most substantial character. On a roadway 60 feet wide are electric cranes and railways, back of which are large warehouses. Beyond these is a granite-paved boulevard, then the city itself, with the Custom House, market, banking houses, stores, and all forms of commercial activity.

On the large square, *Frei Caetano Brandão*, in the center of which is a statue of the bishop after whom the square is named, the founder of the first hospital in the city, stands the *Cathedral* erected in 1710, elegant and harmonious, of rather severe exterior, but within brilliantly decorated in high colors. On the bay side of this square are the ruins of an old fort called *Castello*, preserved for historic interest. The principal plaza is the *Independencia*, adorned with flower beds, with lawns, bushes, and trees; but the people here loving nature and flowers, no one ever steps on the lawns or plucks a blossom, which indeed is the case in the other cities of Latin America. In the center of the square is a monument to General Gurjão, a superb bronze statue of a soldier who died fighting, while he exclaimed, "See how a Brazilian General dies!" At the side of the plaza, Parque Affonso Penna, is the *Government Palace* erected in 1776, and near by the blue tinted *City Hall* of colonial days, containing in the main hall a beautiful painting of the death of the great musician, Carlos Gomez, who died here.

In the square, *Visconde de Rio Branco* on a marble base is the most artistic monument of the city, a bronze statue of the Brazilian patriot, *José da Garma Malcher*, with the figure of a beautiful young girl below writing the name of the hero.

Another garden, *Baptista Compos*, is a little paradise with fountains, lakes, bridges, plants, etc.

A unique public recreation ground at the other end of the city is a tract of primitive woods, called *O Bosque*, dense and somber with great trees which as the city grew in that direction was with wonderful foresight preserved by the Municipality. Driveways were opened disclosing its poetic beauty, greenhouses, cascades, fountains and other embellishments added, making it a resort of which the people are proud.

The usual *Praça da Republica* contains a beautiful marble monument with bronze figures commemorating the proclamation of the Republic. On this square, the heart of the city, is the *Paz Theater* of white marble, imposing and austere, of the Corinthian order of architecture, with a tranquil grandeur unlike any other in South America. The interior is decorated with paintings by De Angelis surrounded by high gold reliefs, contains a foyer with a beautiful inlaid floor, and has everything in lighting and mechanical devices of the most modern type. The Paz Hotel is near.

Notable churches are *Santa Anna*, built in 1761, and *Our Lady of the Carmo*, about the same date, and *Our Lady of Nazareth*, built in 1802, where seamen especially bring offerings, wax miniatures of boats and other objects of maritime life, forming a curious museum of nautical art.

The greatest interest and admiration may be excited by the *Goeldi Museum*, one of the most famous in South America, and now under the direction of Dr. Jacques Huber. The building is surrounded by fine specimens of the Amazonian forests with the finest collection in the world of the *Hevea brasiliensis*, the best of the many varieties of rubber trees; and the experimental garden probably contains every species of rubber known, with many other plants of commercial value. Of equal or greater interest are the archæological, ethnological, and zoological departments. Here are collections of pottery of extinct Indian tribes inhabiting this region at the time of the Portuguese discovery, with funeral urns and pottery from mounds of the Island of Marajó. Weapons and utensils of the Amazonian Indians are shown. The collection of Brazilian fauna comprises a complete series of Amazonian mon-

keys, a great variety of birds, the larger mammals, as the tapir, jaguar, etc., and insects. Many living creatures, aquatic birds, parrots, toucans of gorgeous plumage, alligators, anacondas, boa constrictors, electric eels, and many others, safely caged, enchain the attention.

The *Lauro Sodré Institute* for industrial and agricultural training, a *School of Commerce*, a *Fine Arts Academy*, and other establishments for education, for the sick, and the poor are liberally provided. A fine new *Market* is not of small importance. The broad, clean, well shaded streets are often lined with beautiful villas and gardens; though but a degree and a half from the equator the heat is not excessive, rarely above 90° Fahr.

Manaos. The visitor to Pará, is likely to be on his way up the Amazon to Manaos or Iquitos; if a bit of an explorer, perchance to Bolivia by the newly practicable Madeira and Mamoré route, or to the rubber regions in any one of five countries. The city of Pará is about 80 miles from the pilot station Salinas; and a further journey of 24 hours, nearly 200 miles, is required, across a bay, then for nine hours through a narrow channel, before one really enters the broad stream of the great Amazon. Along the narrows the landscape is charming; clearings with huts and children are frequent; canoes with fishermen, and small steamers calling at the *bar-racas* (plantations) for rubber or to bring provisions are numerous. The luxuriant vegetation is fascinating. But from the remoteness of the shores, on the immense wide river the four or five days to *Manaos* may be somewhat monotonous. The greater will be the surprise of the uniformed traveler when after 900 miles through the enormous wilderness of forest he arrives at this new city, with a population of 80,000, truly a wonder of wonders. Its location is at the junction of the Rio Negro with the Amazon; one writer says on a large bay, another that it is on the left bank of the Negro eight miles from the Amazon. At all events it has a safe and quiet harbor with excellent port works arranged to fit the rise and fall of the river, about 50 feet. A floating roadway extends into the river, a platform and pontoons supporting warehouses; and ocean steamships come alongside. Hills have been lowered, shallow places filled in, and waterworks and

drainage systems supplied; so that a remarkable city indeed is here in the forest. It is said to be the best lighted city in Brazil. The *Municipal street*, 100 feet wide, is lined with handsome buildings. The *Eduardo Ribeiro avenue* in the afternoon and evening is thronged with people of wealth and fashion. The *Amazonas Theater*, on this avenue and S. Sebastianião Square, is of astonishing magnificence, having cost \$2,000,000; its beautiful colored dome is a conspicuous feature from the harbor. The interior compares with the splendid exterior, allegorical paintings by De Angelis, the celebrated Italian artist, ornamenting the ceilings of foyer and auditorium. The *Palace of Justice*, a white marble building in Roman style, with a bronze and marble staircase, is also imposing. The *Cathedral* is a vast temple of simple architecture. There are excellent school buildings, a public library, a museum with curious Amazonian specimens, a spacious market cool and well ventilated, and a public garden with music from six till midnight. Electric fans are everywhere in evidence, ice here manufactured is supplied in abundance, and excellent sanitation makes the capital surprisingly free from sickness.

Iquitos. By ocean steamers, the Booth Line from New York and from London, the journey may be pursued up the Amazon as far as *Iquitos* in Peru, a city of 15,000 population, where the Amazon, over 2000 miles from its mouth, still has a width of nearly three miles and an average depth of 25 feet, twice that in the rainy season. The city is a few leagues below the junction of the Marañon and the Ucayali, by which the Amazon is formed. *Iquitos* is quite cosmopolitan with representatives from various European and American nations. It has many warehouses, and commercial and other modern buildings of brick and iron. One hundred and fifty feet above the river and surrounded by dense forests, the climate is not so bad as it might be, though the temperature averages 85° to 90° all the year around; as a rule the place is not unhealthy.

Rubber is the principal occasion for its being and growth, and its commerce is rapidly increasing. In all directions lie the rubber forests, or more accurately the forests which contain rubber trees. For these do not grow conveniently in groves, except here and there occasionally a few trees, but scattered singly in the damp forest, perhaps 100 or 150 trees

in an *estrada* or section of about 100 acres, an area which a single man can take care of. The *estrada* is really the path leading from one tree to another. The man, called the *seringueiro*, sets out early in the morning with hatchet and tin cups or basins; he makes on each tree several incisions, 4 to 6 inches apart around the tree. By the time the round of 3 or 4 miles is finished it is time for lunch; then the collection may begin, the tins containing the fluid called *latex* are emptied into a pail, eight or ten quarts in all, producing about as many pounds of rubber. This is finished by noon, after which the latex must be smoked over a wood fire; it is coagulated on a sort of ladle twirled over the smoke. Fresh coats are added when one is dry until a *bolacha* or biscuit is formed of from 5 to 100 lbs. The man who does this work may be a native Indian or a resident of Ceará or elsewhere. He works for a contractor who may employ several hundred. Many atrocities have been committed by these contractors, who have compelled the defenseless Indians to work for them without pay and have inflicted cruelties, torture, and murder upon them and their families, especially in the Putomayo district, where an English Company has been engaged. Through recent investigations the cruelties have been terminated for the moment; but such is the greed and inhumanity of some professedly civilized men that close watch must be kept by humane officials to prevent further abuses and the extermination of harmless savages.

The rubber is collected in this way from trees called *jébe* or *hevea*, but there are many varieties of trees which produce rubber of varying excellence. A kind of tree called the *caucho* which grows on higher land is cut down by the *cauchero* and the entire *latex* is extracted, averaging about 50 lbs. to a tree; this is a quality of less value. Brazil has a heavy export tax on rubber, Bolivia about half as much, while Peru exacts less than a quarter.

The terrors, perils, and the fascination (to some few) of the immense and awful forest are in many books described. Few are the explorers who, aided by many hands wielding machetes, have penetrated far into the jungle from the flowing river roads. For their adventures I have no space. Yet in these days of doughty deeds by valiant women, a far more

wonderful exploit by one who doubtless had no wish to usurp man's functions as an explorer may here be chronicled. Long, long ago, in 1769, when the forests were untrodden even by the casual rubber gatherer, Madame Godin, to join her husband in Guiana, left Riobamba in Ecuador with two brothers, a nephew, a physician, three women domestics, a negro servant, and thirty Indians. Having passed over the great mountain range they embarked on a stream, one of the many affluents of the Amazon, to meet with repeated disasters. Their boat was upset, their supplies and baggage were lost. The Indians deserted. A raft being made, this also foundered. Proceeding on foot, lost in the forest they wandered until, exhausted with starvation and effort, they lay down to die. This all the rest did, but after two days by her dead companions, Madame Godin arose. Shoeless, her clothing nearly gone, with no food save roots and herbs she struggled on amid the terrors of the jungle till after nine days she met two so-called savages. These treated her kindly, ministering to her needs till she was able to proceed, then conducted her to a white settlement farther down. As a white-haired woman she ultimately reached Para and joined her husband, a notable illustration of *the weaker sex*.

The Madeira Mamoré Railway. Only the unusually enterprising tourist, the explorer, or the business man will be likely to investigate this new railway, but all may like to know a little about it. The Madeira, the largest tributary of the Amazon, comes in from the south a little below Manaus, and is the outlet and means of access to a large portion of the state of Matto Grosso in Brazil and of the country of Bolivia as well. Continuous river navigation has, however, been impossible on account of a series of 19 falls and rapids on the Madeira and Mamoré rivers within a distance of 200 miles, thus preventing earlier development of a section rich not only in rubber, but in minerals, and in agricultural and stock-raising possibilities. About 570 miles up the Madeira River is the new city of Porto Velho, where the railway begins, now completed for a distance of 202 miles to Guajará Mirim on the Mamoré, about due south. Thus has been accomplished a work which in 1869 was planned by an American, Col. George Earl Church, under a concession from Brazil and Bolivia.

In 1871 he turned the first sod of the railway, but financial and other difficulties soon caused the suspension of operations. In 1878 another effort was made, also to meet disaster. To-day the better knowledge of the causes of tropical diseases and of methods of sanitation has caused the task to be triumphantly concluded. Construction work, begun in August, 1907, was carried on with such effect that in spite of many difficulties the final section of the road was opened for traffic July 15, 1912. As yet there is no fast express, two days being required for the journey. Porto Velho, the northern terminus of the road, on the right bank of the Madeira, is a town of 1500 people, with an ice plant making six tons a day, piped water supply of two kinds, one for internal use, and with wireless telegraphic communication with Manaus, hence close relations with the rest of the world. To this port ocean steamers may come during part of the year, November to June, and large river steamers at any time. The residence part of the city is on a hill a little back. Regular trains three times a week leave at 8 a. m. The greater part of the journey is through the jungle in a cut 100 feet wide, though in places the river is visible, at Santo Antonio a picturesque view including the first cascades. Near Caldeiro Station is one of the worst places on the river, called the Devil's Caldron, invisible, however, from the track. South of Mutum are 25 miles of straight track passing through an immense rubber concession to the company. At Abuna, 218 kms., where the train is due at 5.30 p. m., halt is made for the night close to the river. Leaving Abuna at 7.30 the next morning the arrival at the terminus should be at 3.15 p. m. Villa Murtinho, 93 kms. south of Abuna, is just opposite the town of Villa Bella in Bolivia, and the junction of the Beni and Mamoré, the Bolivian city being between the two rivers; the Mamoré from here south forms the boundary between the two countries. At the terminal, Guajará Mirim, there is another town of the same name on the opposite shore in Bolivia, from which a railroad is now being constructed to Riberalta, an important town of Bolivia, near the edge of the Amazonian forest and the Bolivian cattle country. For the development of northern Bolivia which is drained by the Beni River, this railway will be a great motive power, as also for Matto Grosso of Brazil.

An enormous region of rubber and of many other possibilities is hereby rendered accessible, as this great accomplishment is to be supplemented in Bolivia by other important connections. The formal inauguration of the road already long in use was postponed on account of the desire of the President of Brazil to assist in person at the ceremonies.

It is an item of interest that the head waters of the Guaporé River, a branch of the Madeira, are so close to those of the stream Aguapehy, tributary to the Jaurú and Paraguay rivers, that they could be connected by a canal less than 1000 feet long. Years ago the trip across from the Amazon waters to the Paraguay-Paraná basin was made in a canoe by hardy Portuguese explorers following this route, which in the years to come may develop into a frequented waterway.

Any one wishing to make the journey from Manaus up the Madeira to the railway is obliged to pay a tax of 9 milreis, in addition to a deposit of 50\$ for hospital or funeral expenses in case he should contract yellow fever or other serious ail, but the 50\$ are refunded on his safe return.

On the Way Home. Few will sail away from the matchless harbor and city of Rio without keen regret and the determination to revisit them at the earliest possible moment, though with these once lost to view he may look eagerly forward to the conclusion of the homeward voyage. This at present by the Lamport and Holt steamers occupies 16 or 18 days, which are happily spent on their large and luxurious vessels, the several calls en route relieving any possible monotony. The weather is generally delightful, two weeks of summer, not too hot, followed by one never knows what, for the two or three days before reaching New York.

A few may prefer to take ship to a European port and spend some time on the other side before returning home, but there is no longer a necessity for going that way in order to have a comfortable voyage. Although the steamers of the English Line are a trifle faster, even with the best connection at Southampton or Liverpool the time to New York is longer.

Bahia. About 60 hours from Rio on the third morning of the return voyage, the ship is likely to be at anchor in the harbor of *Bahia*, once the capital of Brazil, and now with a population of 285,000 its third city. It is 720 miles from its

ancient rival. Founded in 1549 by Thome de Souza this is the oldest of all the Brazilian cities and has ever been a place not only of commercial importance but of artistic and literary culture and of sumptuous religious sanctuaries. Until 1762 it was the seat of colonial power. The location of the city on the east side of a deep and well protected gulf is admirable; its beauty would excite enthusiasm if it were seen before Rio instead of afterwards. The name of this city is really São Salvador, while the bay is Bahia de Todos os Santos, Bay of All Saints, the name Bahia of the State having, as in the case of Pernambuco and Pará, by foreigners been transferred to that of its capital city. Its appearance is indeed striking, with its upper and lower town, the former crowning a high and almost perpendicular bluff, the latter, looking almost as if it had been pushed over the edge, occupying a narrow strip along the water front, both sections charmingly variegated by dense tropical foliage. Conspicuous from a distance are the great elevators connecting the upper and lower town and many large buildings, towers, and churches.

In a small boat one may be rowed a mile from the anchorage to the landing, then passing to Ribeira street, may follow this to an elevator at the right or by a steep and narrow street on the face of the bluff may climb to the top. By the elevator at the right 15 or 20 may be lifted in a wooden box to the edge of a pretty square above, the *Praça da Constituição*. At the right is the site of the ancient *Municipal Building*, spoiled by the Dutch in 1636, later repaired, and recently rebuilt, with a new four-faced clock tower added; but in January, 1912, it was riddled by shots from Brazilian warships on account of an insurrection. A large attractive building at the rear of this square, which formerly was the residence of the Portuguese Governors and the Presidents of the Province, has been rebuilt from the foundations and is now used for the Governor's offices, his residence being in Corredor da Victoria. The American Consulate is well located on a corner of this square. Narrow lanes of three centuries gone, lead from here in several directions; but some of them are traversed by electric cars which frequently leave the Plaza for diverse sections. A pleasant suburban ride is to the fishing village and suburb of Rio Vermelho, where a nice luncheon may be obtained; one passes



PRACA DE FREI CAETANO BRANDÃO, PARA



BAHIA



on the way out, through some of the fine residence streets, by the side of beautiful parks, and by the lighthouse on Cape Barra at the entrance to the bay, on the site of an old fort. There is a fine view from the lighthouse top, well worth the climb, and one may walk on to Rio Vermelho a little farther.

The narrow Chili street runs from the Praça da Constituição to the *Castro Alves Square*, 150 feet above the bay, with a *Statue of Columbus* surmounting a marble fountain in the garden. On one side is the *San João Theater*. Here also are the *Paris* and the *Sul Americano Hotels*, and the building of the journal, the *Diario da Bahia*. Following from here Carlos Gomez street we may come to the *Piedade Square* with a pretty garden, and a marble fountain with a symbolic statue of an Indian stepping on a serpent. On one side of the square is the *Piedade Church*, on another the *Senate House*, of Italian style of architecture. Passing the *Police Headquarters*, a pretty street, Pedro Luiz, with modern buildings, leads to the *Passeio Publico*, a delightful resting place, the largest and most popular in the city, shaded by mango trees, containing an obelisk of Egyptian marble, commemorating, one says, the arrival of King João VI in Brazil, another the opening of Brazilian ports to foreign commerce in 1808. At one side, on the Afflictos Square, the thick walls of an old fortress have been remodeled into police barracks. A steep street leads down from the Passeio Publico to a colonial fortification, the *Gamboa Fortress* at the edge of the water.

The *Largo Duque du Caxias* contains in a pretty garden an imposing monument of Carrara marble and bronze, 100 feet in height, named the *Dois de Julho*, the date of the evacuation of the State by the Portuguese troops in 1824, which sealed its independence. At the top of the tall Corinthian Column stands the traditional Indian with foot on a dragon, signifying the triumph over despotism. Colossal figures of bronze represent the great rivers of Brazil, with other accessories making this one of the finest monuments in Brazil. A notable peculiarity of the city is that the monuments are of symbolic character and not of individuals, no busts or statues of heroes save one to the English philanthropist, Dr. Paterson, a physician whose good works were many. In the Praça do Riachuelo, which is overlooked by the handsome edifice of the Commercial

Association, another beautiful monument, a marble pillar surmounted by a flying Victory, commemorates the triumph of Brazil over Paraguay in the terrible war of 1864-70.

Among a number of interesting churches is the *San Francisco*, built in 1713 with elaborate and gorgeous interior decorations. The *Collegio Church* of the Jesuits, now the *Cathedral*, built of stone prior to 1572, on the Largo Quinze de Novembro, has an imposing interior, the details of its ornamentation, from the design of the main altar to the work in the ceiling, making it perhaps the most curious in Brazil. A Benedictine Church, *San Sebastião*, on a central eminence, is peculiar in being all white inside and out, the main altar and the Saints' images of Carrara marble, while the two towers and the dome, the highest spot in the city, are white also. Oldest of all in Bahia is the Church *Nossa Senhora da Ojuda*.

Bahia boasts of one of the best *Medical Schools* in South America, with a finer building than the School in Rio possesses; this on the Largo Quinze de Novembro. It has also a *Law College* and other excellent schools, one of the most valuable, a *Lyceum of Arts and Trades* founded in 1872 with day and night classes, workshops, and class rooms, and 2500 pupils in attendance. A *Public Library* with 30,000 volumes, a *Municipal* with 20,000, and still others are of good service to the people. The *Poorhouse* is an attractive looking place and there are excellent hospitals.

In the eastern suburbs are charming vistas; and of homely interest are the hundreds of colored women engaged in laundry work along a little stream with the clothing spread out upon the grass and bushes. No machine washed and dried clothing there, but all done in good fresh air.

Bahia is the great cocoa port of Brazil, furnishing about one-fifth of the world's supply; the State is wonderfully rich in productions of almost every kind. One may ask what does it *not* produce rather than what it does: coffee, tobacco, rubber, cotton, sugar, nuts, woods, etc., besides a wealth of minerals of great diversity; the largest diamond carbonate ever discovered was found here in 1895. It weighed 3150 carats and was divided in Paris into smaller stones. Gold, copper, and many of the precious stones are found in various sections.

Even the sand is exported, being worth \$100 a ton; some, at least, of a deposit found by an American engineer along the shore, called monazite, rich in thorium silicate, used for electric lights.

The lower part of the city should not be ignored, for here are the commercial houses, the markets, Custom House, arsenals, Post Office, factories, and many of the stores. There is one pretty plaza, but the streets are very narrow, and at night it is wholly deserted for the residential section above, save for a few of the poorer classes who live on the steep hillside.

On the boundary of this state are the *Paulo Affonso Falls* of the San Francisco River, worth visiting if time permits; the valley is one of the most fertile regions of the globe. A line of comfortable steamers subsidized by the State, running to Pernambuco, gives opportunity to change at Peneda, about 30 miles up the river, to a smaller boat, which ascends to Piranhas, near the foot of the cataract, 150 miles farther, a two days' journey. A railway runs from Piranhas to Jatoba, 71 miles, to navigation above the Falls. Pedras, the Falls station, is about half way. Then a ride of two hours or so brings one to the great cañon. Men living near, for a small fee, will act as guides. There are various rapids and one high fall; the river first compressed by rock banks is divided into five narrow branches through rock clefts, four of which tumbling down 15 or 20 feet become a mass of foam and rush down a steep incline, with a roar audible for miles, in splendid rapids. The four branches soon unite, rushing on to the great Fall, the Mai da Cachoeira, where all five take a grand leap of 190 feet, which may best be surveyed lying prone on a flat rock 72 feet above the Fall, too awe-inspiring a sight to be enjoyed by every one, but to those of steady nerve a magnificent spectacle. A visit to the Bat's Cave may as well be omitted.

Unless one stays over a steamer in Bahia, one may have but a glimpse of the city's many attractions and of course none of the unique, solitary, yet some day to be famous, waterfalls. Five or six hours only on shore are generally permitted to the tourist, though the steamer is likely to delay several more after the return on board. But it does not do to take chances on so important a matter.

From Bahia the sail is generally to Port au Spain, Trinidad, where the hours will be a pleasure after ten days on the broad ocean. Once more you are in a land where you will hear English "as she is spoke" in various ways by persons of various complexions. A drive past the *Victoria Institute*, the *Government House*, and the market place to the reservoir, the *Botanical Garden*, and to the beautiful *Queen's Park Hotel* will be greatly enjoyed; and the opportunity for shopping in the excellent stores or from the natives who bring wares to the boat will be improved by some whose purses are not yet empty. On the regular steamers, there is no opportunity to visit the celebrated Pitch Lake some miles away, a lake with an area of 114 acres, on the surface of which one may walk if he moves along promptly. This is the main source of the supply of asphalt used in the United States.

The next morning the steamer is at Bridgetown in Barbados, a pleasant old town where some hours may be spent in a drive, a stroll, or in shopping to buy a few curios or embroideries. This is surely British soil, though 90 per cent of the inhabitants are negroes. Near the landing is *Trafalgar Square*, with a bronze statue of Nelson in the center, justly his due as it was he who preserved Great Britain's West Indian possessions in 1805. Here are the government buildings and *St. Michael's*, the Anglican church. A *Carnegie Library* and a *Salvation Army Building* not far away may be reminders that we are approaching home. The *Woman's Self-Help Association*, also on the Square, invites and deserves patronage; for Indian pottery and other curios, lace, embroidery, and various edibles may here be procured at modest prices. A house called *Wilton* at the corner of Bay street and Chelsea road is of interest as being in 1751 the temporary residence of George Washington, the companion of his elder brother Lawrence, who having contracted consumption had come here in the hope of recovering his health. Dying a year afterward, Lawrence bequeathed his estate of Mount Vernon to his brother George.

Seven days later Sandy Hook is passed; the Statue of Liberty, the old and new sky-scrapers draw near. Every one is glad to return, however delightful the journey. Some, if not all, of the passengers will in future have a little broader outlook; regarding the *Other Americans* with somewhat more of

respect; well knowing now that there are agreeable scenes to be revisited, remote regions to be explored, and for those who have the judgment, tact, and energy, wonderful opportunities for enterprise.

CHAPTER XXXIII

SOUTH AMERICAN TRADE

ALTHOUGH information and advice in regard to South American trade have been liberally proffered in many books and magazines, and in various addresses to commercial bodies, a few additional remarks may be of service; as from current report, cogent need still exists to reiterate with emphasis many suggestions previously urged, some of these in a magazine article of my own as long ago as July, 1907, but equally important to-day.

Except for certain facts of common knowledge, it would go without saying that the first and most important point for a manufacturer to consider is whether or not he really cares to cultivate South American trade, and will make a determined and persistent effort to secure and preserve it; a few occasional sales certainly not being worth while. To form an intelligent opinion on this question conditions must be thoroughly understood.

Commercial men should by this time be aware that in the regions to the south business opportunities are large and are rapidly increasing, that the population of the Latin American Republics is above seventy millions, and that their commerce, amounting in 1912 to two and a half billion dollars, is far greater than that of China and Japan together. In fact Argentina alone has more commerce than either of these Asiatic countries, and Brazil has more than Japan. Further, the ratio of increase on our South American continent is greater than in those regions of Asia.

Next, the manufacturer should realize that the longer he delays entering the field the smaller will be his chance of success; that the British and Germans have long been on the ground, and that, in spite of our fancied superiority in business methods, they will not easily be supplanted. He should

understand that the South Americans in general are not eager to trade with us, their association with Europe, both by blood and by steamship lines, being closer and stronger. In some countries we are really unpopular; in others they do not care a rap about us either way. Many Latin Americans are distrustful and suspicious of our nation from a political point of view. They dislike the boorish and supercilious manner of some of our half-educated traveling, railroad, and mining men, although Americans of broader intelligence and better manners are well liked. Even in Peru, which country, if any, is supposed to be especially friendly, a prominent statesman, F. García Calderón, in his recent book on Latin America, expressed grave fears of the *Yankee Peril*, more serious than that of the Germans.

Pleasant speeches at dinner should not blur the fact that Latin Americans are more enthusiastic about *Latin* America than *Pan* America. Capital, to be sure, from any quarter is welcomed in undeveloped countries and decidedly better bargains will not be despised. Ecuador, Peru, and Bolivia gladly accept our money for internal development, but Brazil, Chile, and Argentina, as a rule, get what they need from Europe, nearly a billion and a half dollars being invested in Argentina by Great Britain alone. It is time to realize that it is for our interest more than theirs to cultivate friendly and commercial relations with South Americans. They will not be neglected by others or suffer greatly if we do not favor them with our presence and regard. To undertake the establishing of commercial relations with the idea that it is a condescension on our part is a mistake certain to interfere with the rapid extension of business.

It is obvious that only those American goods which are exclusive or which *require* no tariff advantage can long compete successfully on even terms abroad with European wares, now sold by active enterprising business men determined to keep and increase their trade.

An important and primary consideration is the willingness and ability to conform to South American custom in regard to *credit*; it is rutable to defer payment from three to six months after the delivery of the goods, the price being fixed accordingly or interest being added. Such credit, readily

granted by European firms, must be given by ours in order to secure extensive trade. In some quarters an idea is current that South American credit is not generally good, but shippers of many years' experience assert that customers there are quite as reliable and honest as those in Europe or the United States. Furthermore, certain New York shippers take charge of and guarantee the collections, so that no loss is possible. Where results have been unsatisfactory it has often been due to the incompetence or dishonesty of the agent rather than to the Latin American with whom he dealt. Naturally suitable precautions should be taken and careful scrutiny exercised, as not every one is honest in any quarter of the globe.

As an aid in investigating credit, as well as for other reasons, the establishment of *American banks* in the various countries is an urgent necessity. Rumors as to plans for these have long been abroad, but as yet nothing has been accomplished. Few of our houses may be capable of organizing a great chain of banks like that of *London and La Plata*; those who might apparently do not wish to, or they are awaiting the passage of the currency bill. But in any of our large cities capital might be raised to organize a single bank in Rio, Montevideo, Buenos Aires, or other cities, which would be a valuable center of credit information as well as of exchange. Under able and cautious management such banks would be of great service to our exporters and repay the investors with 10 or 12 per cent dividends if not more.

Much has been said about *American Steamship Lines* as an encouragement to our commerce. While it would indeed be a pleasure to see the Star Spangled Banner now and again floating from vessels in foreign ports, this is of less consequence than the banks. If neither business judgment nor patriotism impels our multi-millionaires to build up a merchant marine, our needs will be supplied by others. Already we have excellent bi-weekly passenger service from New York to Buenos Aires and every week steamers to Rio. On the completion of the Canal we shall have weekly service from New York down the West Coast by at least two good lines of steamers. In addition a large number of freight steamers is already plying to each side.

With favorable consideration in regard to embarking on foreign trade, or even as a preliminary, some ordinary geographical knowledge and a slight acquaintance with local conditions, easily procured, is highly desirable. It is not a prepossessing introduction for a gentleman to receive a letter directed "*Buenos Aires, Brazil or Chile,*" as often happens, this being one degree worse than if Brazil or Chile were used alone, as the former address betrays not merely ignorance but the man's indifference to his display of it. The common practice of mailing letters with insufficient postage is still more annoying, and is *absolutely inexcusable*.

Many of our largest industries and some smaller ones already have an excellent trade with South America, so that on the average the United States stands third in the value of goods imported into the various countries. Great Britain is first and Germany second. One meets their representatives everywhere.

As from six weeks to three months will pass before an answer may be received to one's letter addressed to the United States Consul resident in the various countries, it is the more important to learn as much as possible at home of the character of the different localities, the variety of climate and productions, the condition of the people and their requirements; some of which information may be found in the valuable monthly *Bulletin of the Pan American Union*, in the excellent Semi-Monthly, *The South American*, and in the multitude of books recently written on the various countries.

With even the slightest knowledge one might avoid the absurdity of sending lawn mowers to Iquique, a barren desert where for the few and expensive plots of grass not only the water but the soil is imported; or rubber boots to Lima, where only a slight drizzle is ever experienced and small probability exists of need in the back country; or old-fashioned chandeliers on a three-foot stem to places where electricity is employed or where the ceilings are 15 feet high. If ordinary precautions had not been ignored, it would seem foolish to say that before shipping goods one should ascertain whether such articles are wanted in that locality.

It is well to note that except in the case of some novelty, the people know what they want and insist upon having it.

They will not take what *we* think they ought to want or what is convenient for us to send. The Latin Americans are quite as fashionable and up-to-date as we are; the Indians, on the contrary, want the same thing year after year and for centuries. If their trade is desired their taste must be catered to, for others are ready to supply what they want if we do not.

Permanent commercial interests alone should be sought. Great injury has been inflicted upon the reputation of our merchants by the unjustifiable conduct of manufacturers, who in dull times have sent men abroad to take orders; then, business at home reviving and rush orders being received, they have turned back to their old customers, ignoring the new and leaving *their* orders unfilled, careless of their embarrassment and inability to supply their needs from any local market. Such trade permanently reverts to the British dealers upon whose steadiness they can rely.

It would seem a gracious act if some of our large manufacturers, instead of wanting the whole earth, should cultivate the South American trade, certain to prove profitable, and leave some of their home market to be taken care of by smaller people not so well prepared for the conquest of distant fields.

The *changeableness* sometimes exhibited seems extraordinary. An American in Bolivia engaged in a large business with Indians, after much urging and time spent, was persuaded by a traveling man from New Orleans to give him an order for a thousand dollars' worth of goods to be delivered within six months. About the time they were expected, the American received a letter saying that the firm had concluded not to fill any orders to Bolivia!

A difficulty frequently experienced where cash sales have been made, and an excessive annoyance to the purchaser, is that a draft sent at the same time with the goods if not earlier reaches the consignee a week, a month, or more before the arrival of the merchandise. A month's interest is lost by the purchaser, with the goods not in hand. When they do arrive they are often not as ordered, deficient in quantity and quality, and naturally that is the end.

It should be superfluous to say that merchandise should be up to the *quality* of the *sample*, but not so. Such hap-

penings, common at home, will not work abroad where the tariff is level and competition free.

Further, the goods must be precisely *like* the sample, not even something better. Men who order two-wheeled vehicles do not want four-wheeled. The latter in some sections are impossible. The assumption that people do not know what they want, or the carelessness which permits of gross mistakes in shipping goods thousands of miles is evidence of crude business ideas and methods.

In most sections a slight difference in price is not so keenly regarded as the quality of the goods and the *steadiness* of price. It is more agreeable to them that an article should be sold for 30 cents through a period of years than that it should vary from 25 or 28 cents to 32.

Careful packing of goods, a matter of the greatest importance, has for years been continually urged, without avail or with but slight improvement. It is as true now as seven or eight years ago that packages from the United States on the dock in South American ports may be picked out on account of their disreputable appearance. Boxes splitting open, bags and bales ripping apart, many goods lost or ruined, is the continual complaint. Of course there are exceptions. Some houses may have reformed.

A United States official, writing for goods to his New York druggist, charged him particularly about the packing. The bottles arriving in a pasteboard box were broken. Again he tried with definite instructions and the same result. The next order went to England, where it was properly filled.

The persistence in *ignoring expert advice* is extraordinary. Agents in South America often send explicit directions as to packing, the size and weight of boxes, etc., without the slightest effect. Goods are dispatched in a 500 or 1000 lb. box to a region where they must be transported on the back of llamas, whose load is 100 lbs. The box is left on the dock or at the railway station; the goods are never used.

New York shippers report that much freight reaches them in a condition impossible to embark on the long journey. It must be refused or repacked. These are curious commentaries on the supposedly superior business ability of Amer-

icans. The splendidly bound boxes and bales of British goods are in striking contrast.

On the East Coast transportation by water and rail is general, though not complete. On the West, Chile is well served with railroads, Bolivia's are rapidly developing, but an enormous region remains, especially in Bolivia, Peru, and Ecuador, where transportation by mules, burros, llamas, and Indians will long continue to be the only methods.

A material factor in securing South American trade where agents are employed is the sending of *suitable* and *competent men*. One of our largest houses, noted for the rather superior quality of its salesmen, admitted that *they* had by *experience* discovered that some who were very good salesmen here did not succeed there. Precisely why Americans should be so reluctant to follow advice from experts on subjects of which they are ignorant is a puzzle; but it is a fact that the preaching of many men for many years seems largely to have fallen on deaf ears. We should comprehend that South Americans are not ignorant barbarians, that in general they have more culture, often more education, than our business men, that their manners are much better, and that if we desire their business we must adapt ourselves in some degree and treat them with courtesy and not arrogance. To speak of them as monkeys, savages, and dagoes, even so as to be overheard, to commit other acts of unpardonable rudeness in churches and elsewhere, boorishly to inform them that they are half a century behind the times, are acts which might seem incredible but are by no means rare. A man who is thoroughly convinced of his own superiority and who regards the courteous amenities of life practiced by Latin Americans as silly and time wasting, as an evidence of insincerity and of a lack of practical common sense, who fancies himself above the conventions of dress and manners as practiced in the cities visited, and as they are in Europe, who would rush and push his wares is likely to make an unfavorable impression and to learn that more haste is less speed.

It should be obvious that to accomplish much a man *must speak the languages* of the countries visited. What success would a man speaking no English have in the United States? Spanish is current in all the Republics save Brazil; there it

is understood by all persons of education, and may do fairly in the large cities; but for an extended tour or a long stay in Brazil a knowledge of Portuguese is essential.

Two extremes are noticed by the observant traveler in South America, each of which appears objectionable. Some American goods are sold at one-half or one-quarter of the home price; which might cause the disinterested layman to conclude that our tariff needed revising; other articles are sold at double or triple the price at home (not always the fault of the duty), a practice in the long run likely to prove unprofitable. Thus a popular sewing machine was bought a few years ago in Arequipa at one-fourth the price in Boston. White paper made in the United States is cheaper in Chile than in Chicago. On the other hand, in La Paz, shoes worth \$2.50 cost \$5.50 to \$6.00, kerosene oil sold at about \$5.00 for a case of 10 gallons, a can of corned beef costs 80 cents; and ham, 60 to 80 cents a lb. The last, put up by a Chicago packer, could be purchased more cheaply at retail from an English firm, having come by way of London, than at wholesale from the Chicago agent on the ground; and the home office would not take a direct order. Whether the price was according to the plans of the home office, or the idiosyncrasy of the agent anxious to make his fortune in a hurry, is unknown. That some agents are arbitrary in their charges might be judged from the fact that boots sold at Mollendo for \$5.00 a pair were priced in La Paz at \$14.00.

The *sharp practice* of some salesmen is greatly to the disadvantage of others. The man who sold a snow-plow to some one on the coast lands of Peru on the plea that the climate would change on the completion of the canal no doubt prides himself on his smartness, indifferent to the fact that he has done much to discredit Americans in all that region. Many seem to think that patriotism consists simply in "blowing" about their country; that they might do it a better service by honorable conduct and courteous demeanor does not occur to them.

I have heard that in many places on the plateau, as probably in the interior, it is customary to charge the poor Indians who earn but 50 or 75 cents a day double the already high price which a white man is asked for the same article, a

sample no doubt of the justice and fair dealing for which we are told that men are distinguished, but in which women are said to be lacking.

Ten dollars a day has been allowed as a suitable sum for *traveling expenses*, and one following the railroads and not being burdened with heavy samples might find this sufficient. In the interior where many pack animals must be employed, or with a large supply of baggage to go by rail, and in Brazil and Argentina where heavy license fees must be paid, the fifteen dollars a day asserted by a recent traveler to be necessary may be desirable. It depends, too, a good deal upon the skill and character of the man.

The *tax on commercial travelers* who sell goods or who merely exhibit samples and take orders is an item to be considered in connection with other expenses. In some countries a separate license must be obtained for each Province or Department, corresponding to our States; in others for each Municipality. A few countries, more liberal, exact no fee whatever.

Beginning with *Ecuador*, \$50 is here charged for one visit.

In *Peru* no license is required for commercial travelers, but there are certain regulations as to samples. If they are such as would enter free of duty no charge is made. If the articles are dutiable, one of each kind and variety is permitted free entry, providing the importer presents in duplicate an itemized description of packages and articles, pays the duty in cash or with bank draft, and within three months exports these samples, thereupon receiving back the cash or bank draft which he has deposited. Should there be any deficiency or substitution of articles, double duty will be exacted and the article substituted will be confiscated.

If samples enter Peru by Mollendo to go to Bolivia, not to return by the same route, they are dutiable, unless the Peruvian Consul in La Paz sends a certificate that the samples have entered Bolivia. The duty previously paid is then refunded. A fee of \$12.50, U. S. gold, is charged by the city of Arequipa as a license in that particular section.

Bolivia is a more expensive country to visit and for that reason is omitted from the itinerary of many travelers. The policy of the Government seems particularly injudicious in

view of the fact that their country is out of the way, that it has no great cities, and that large sales are required to cover the additional time and cost of the journey even without the considerable fee exacted.

Further, each municipality collects a fee for itself; there is no general tax. The fee varies according to the class of goods but in general for La Paz, the chief city (pop. 80,000), is 300 *bol.* or \$116.70 U. S. gold; never more. The authorities of Cochabamba are said to charge 1000 *bol.* for the privilege of selling in their pretty city, while Oruro demands but 100 *bol.* As to other cities inquiry must be made in the country. There is talk of reducing the Cochabamba fee and perhaps the Bolivian Government will soon realize that the country will do better to adopt the more liberal policy of her neighbors, Peru and Chile. It should be added that if two persons go together as representatives of the same house each one is obliged to pay the tax.

Chile, like Peru, is extremely favorable to the commercial traveler, requiring no permits and no duty on the samples, unless in whole pieces of stuff or in complete sets of objects. Six months are allowed in which to reshipe samples free of duty.

The sections of the East Coast are much more exacting.

Argentina, noted for high prices generally, also has large license fees; these not for the country as a whole, but for each individual State or Province. A license covering the Federal Capital, Buenos Aires, costs 500 Arg. *pesos*, paper, \$212.30 U. S. gold, and is good for one year. Each State has its own additional charge, mainly good for a whole year, though a few have half rates for six months and one or two, monthly licenses. These permit either selling goods, or showing samples and taking orders.

Not to enumerate all of the various districts it may be said that the fees vary from nothing in Neuquen to 1680 *pesos*, about \$700 U. S. gold, in Salta; all of the remaining fees except those of Tucumán, Entre Rios, and Mendoza, which are 600 *pesos* (\$255), being less than that of Santa Fé, which is 400 *pesos*, about \$170, per annum. Samples of no value pay no duty; on others the duty which is paid is refunded if the samples are exported within six months. In some places a

difference is made in the license fee if but one line of samples is offered.

In *Paraguay* license fees are charged in each of the five chief cities, varying, according to the importance of the firm represented, from \$84 gold to \$385. At other points, the license is one-third the amount in these cities. An advisory board of merchants fixes the class to which each traveler belongs, five classes altogether. No extra charge for representing more than one firm. No distinction for selling without samples. No tax for samples if taken out within six months.

Uruguay is said to charge 100 *pesos* or \$103.42 U. S. gold, for the calendar year, the license expiring December 31. Application to the Chief of Police of Montevideo on paper with a 50 cent stamp being made, the certificate issued must be presented to the Director-General of Indirect Taxes to obtain the required license. Samples entered under bond are not subject to duty. According to the Consul General of Uruguay a license for the city of Montevideo only, all that most persons care for, is issued for ten *pesos*, \$10.35.

Brazil requires no federal tax of commercial travelers but the States and cities more than make up this deficiency. As a milreis is practically 33 cents, or three milreis about one dollar, only one figure need be given.

Para charges 300\$ (i e., milreis) as a State tax per annum, and 365\$ for the city on each visit. If goods are actually sold, trader's or hawker's license is also required.

In Pernambuco there is no State tax, and but 53\$, for the city of Fortalezain Ceará.

Bahia charges 100\$ for a yearly license, but it must be renewed if one leaves the country and returns.

No license is required in Rio unless goods are sold, when a trader's license is necessary.

São Paulo State has no tax but the city has a fee of 1000\$ and the city of Santos 500\$.

The State of Rio Grande do Sul has a tax of 150\$ for selling in cities, 100\$ for towns, 80\$ for other places. The cities of Porto Alegre, Pelotas, and São Gabriel exact each a license fee of 200\$, Uruguayana 300\$, Bage 800\$, São Borga 60\$.

A power of attorney is generally necessary if agents are

to receive money, this to be filed with a notary public who supplies copies in Portuguese on request.

Samples of no value pay no duty, but if worth more than one milreis duty is levied. The amount is deposited in the Custom House and if the goods are checked and sent out from the same port the duty will be returned.

The Central Railway has a mileage book and the Leopoldina Railway gives a discount of 20 per cent on samples and on fares of travelers.

Information on various matters may be found in the latest Exporters' Encyclopædia; and is furnished to members by the Pan American States Association, the National Association of Manufacturers, and the American Manufacturers Export Association.

As to the resources of the South American countries and the variety of goods which may be exported thither to advantage, these things are set forth in detail in many books, in consular reports, and in back numbers of the Pan American Bulletin, to be found in our large libraries. I have here space for a few remarks only. Since the continent as a whole is still thinly settled and largely undeveloped, its productions and exports are chiefly mineral and agricultural, its imports manufactured goods, as is the case generally with young countries. Conditions in some respects resemble those in the United States half a century ago. Everywhere railways are being laid, and bridges built; towns are needing sewers, electric lights, street cars, and all modern improvements. The great cities are for the most part supplied with these, but many smaller ones are thinking about them or have merely made a beginning.

Material and equipment for the building and operation of railroads are needed in every country, bridge building material as well. Our steel men, our locomotive and car builders have been wide awake to such matters and are doing excellent business in some of the countries. Where, as in Argentina, most of the railways are financed with British capital, Americans have less chance in proportion than in those countries where American capital is considerably employed, as in Ecuador, Peru, and Bolivia.

Agricultural machinery of almost every kind and agricul-

tural tools are in great demand on the East Coast, on the vast estates of Argentina, to some extent in Uruguay and Brazil. They have a smaller sale on the West Coast, where mining machinery is one of the prime necessities. Electrical apparatus of all kinds is everywhere needed and is largely supplied by the General Electric and other companies.

Although most of the countries have coal, the mines are not greatly developed except in Chile; hence much is imported; a good deal of lumber also, in spite of immense forests, as yet unavailable save in a few localities.

In all of the countries the chief import is textiles, principally from Europe, though the United States furnishes a good deal of the coarse grades of cotton, canvas, etc. Industrial machinery, automobiles and other vehicles, utensils, hardware, corrugated iron, sewing machines, paper of various kinds, motors, scales and balances, surgical and mathematical instruments, pianos and piano players, petroleum, gasoline, etc., lubricating oils, typewriting machines; canned goods, particularly on the West Coast, including milk, meat, and salmon, especially for miners, also used in the rubber country; leather goods, boots and shoes, watches, soap, druggists' supplies and medicines, lard, twine, motors, dynamite, arms and ammunition, fence wire, pumps, pipings and fittings, tin plate, glass, porcelain, watches, phonographs, photographic material, and all kinds of novelties and general merchandise are among the articles imported; a few animals, chiefly blooded stock from Europe.

Should one desire to engage in business for himself in any of the Republics, there are good openings for persons with capital who speak the language. Persons without money are warned by our consuls not to go, unless they have a definite engagement or are specialists in certain lines where experts are pretty sure to be desired.

It is unwise to trust implicitly the stories about wonderful mines, though these doubtless exist. If genuine, they are often impossible to exploit without an enormous outlay of capital as was the case with the Cerro de Pasco mines; moreover, as thousands if not millions of people have been deceived about mines in the United States and in regard to many other money making schemes, it is still more foolish to give credence

to tales promising untold wealth in those distant countries. With the best of intentions the enthusiast is liable to be mistaken and deliberate fraud is common; therefore, caution is ever needed. Yet with careful investigation opportunities in almost any line may be found in some one of these rapidly developing countries, superior to those afforded in more thickly settled regions of the earth.

CONCERNING THE COUNTRIES INDIVIDUALLY.

Ecuador. In Ecuador, it may be noted, the United States stands second among importing nations. As a place for investment, enterprise, and residence, it has advantages and disadvantages. The coast region, on account of excessive rainfall, humidity, and heat, has a less agreeable and healthful climate than the rainless Peruvian shores with their moderate temperature; malaria and yellow fever being endemic in Guayaquil, though probably not everywhere on the coast.

The sierra and *montaña* regions of the two countries are quite similar, the high valleys of the sierra district enjoying a healthful and delightful climate. The natural resources resemble those of Peru, although the chief exports are dissimilar. Ecuador's cocoa plantations are her largest source of wealth and supply her principal export. Vegetable ivory, fruit of the tagua palm, is another important article of production, most useful in making buttons. The manufacture of Panama hats is an industry long flourishing. Some coffee and rubber are exported, also hides; and sugar cane is raised. Rich mineral resources are undoubted; gold, mercury, copper, iron, coal, lead, platinum, and silver; these still undeveloped; petroleum and sulphur are found. Many manufacturing industries are carried on in a small way, but such goods are mainly imported: textiles, food stuffs, clothing, drugs, boots and shoes, paper, leather, crockery, vehicles, etc., are some of the importations, with material for railroad building and rolling stock. As the development of the country is regarded as twenty-five years behind that of Peru, it would naturally afford better opportunities in some directions and poorer in others. Railroads are planned in several directions.

Peru. The Republic of Peru presents probably the greatest variety of climate, soil, and productions, to be found in

any portion of the globe. Along its 1200 miles of coast may be raised in the irrigated valleys nearly all tropical and temperate products. In the sierras will be found practically every variety of mineral, and in one place or another climates to suit every taste. Whatever one may desire is therefore to be procured within its borders, although not all points are equally accessible.

The coast lands present unique advantages for agriculture, in that the climate may be depended upon; there is no fear of drought, of sudden storms, or of frost, and though within the tropics there is no excess of heat.

Of 50,000,000 acres capable of irrigation in this section but 2,000,000 now have the facilities, and of these not all are employed; hence there is ample room. The difficulty is lack of capital and sometimes of labor.

The chief export of Peru is sugar; and if our Louisiana planters on account of tariff reduction feel like making a change, they will find in Peru an ample field where four tons to the acre are produced and a price of $1\frac{1}{2}$ cts. a lb. will bring a profit.

Cotton plantations offer excellent opportunities; the best qualities grow well, Sea Island, Upland, etc.; also the native Peruvian which brings the highest price of all, being hardly distinguishable from wool. Yet, as it takes several years to come into bearing (it lives 10 or 15 years), the Upland which bears in six months is preferred by many. In southern Peru vineyards and orchards are a specialty, fruits most delicious, figs, melons, grapes, chirimoiias, olives, and paltas, with vegetables, and with alfalfa, wheat, and maize. Tobacco is raised in various sections and coffee in many, none finer in the world.

The sierra country is full of minerals: gold, silver, lead, copper, quicksilver, tungsten, cinnabar, vanadium, anything you can mention. Every kind of coal is found, though as yet the mines are mostly undeveloped for lack of transportation facilities; oil of fine quality exists along the coast in Tumbes, in Puno near Lake Titicaca, and in other sections; borax in the Arequipa district; iron in many quarters; peat in Junín. On the plateau, besides minerals galore, are excellent cattle lands; many sheep are raised, Scotch shepherds and colliers here look-

ing after them; the native breed is crossed with imported merinos, making good stock, furnishing 5 to 8 lbs. of wool per head. Alpacas every two years yield from 6 to 9 lbs. of better wool, while the vicuña furnishes a smaller supply of still finer grade.

The east side of the mountains is rather difficult of access, but not too far down, affords a delightful climate; a colony willing to work would find pleasant homes in various localities. In valleys near Cuzco is the finest of cocoa, in the Chanchamayo or Perené Valley back of Lima and Oroya are millions of coffee trees, lower down is plenty of rubber. Some is exported by way of Mollendo from the Inambari, Timbopata districts, more by Iquitos and Pará from the Ucayali, the Putomayo, and other sections. While men frequently say that they do not go to such countries for their health, it is indeed a pity that some seem to forget that they are human beings and treat the inoffensive natives in a manner far worse than savages. In these regions the heat and humidity are unpleasant and in limited sections unhealthy, though the dangers are by some over-estimated. Many papers and magazines publish sensational stories of adventure, often knowing them to be exaggerated; all books do not justly represent conditions. Many stories of hardship, when true, are merely evidence of ignorance and bad judgment, utterly foolish conduct quite inexcusable, in sections where others have experienced not the slightest difficulty.

Persons with moderate capital not interested in mining or agriculture might find it profitable to undertake manufacturing in certain lines. There are now in the country a few factories for cotton, woolen, biscuit making, chocolate, fruit preserves, cocaine, and matches; also flour mills.

There is opportunity for electrical power in many places, for installing electric lights, sewers, water pipes, etc.

Provisions are in certain sections extremely cheap, in others very dear, on account of transportation difficulties. Lima is called expensive and it would seem that eggs and chickens might be profitably raised near by, also dairy products and other supplies.

At present the chief exports from Peru in the order of their value are minerals, sugar, cotton, rubber, wool, petro-

leum, guano, Panama hats, hides and skins, ice, cocaine, coca, coffee. The leading imports are textiles, coal, machinery, etc.; from the United States, machinery, wood, drugs, meats, bread-stuffs, shoes, coal, hardware, arms and ammunition, soap, vehicles, instruments and apparatus, general merchandise.

It should be noted in connection with Peru, that machinery and supplies for railroad construction and for mining are admitted free of duty; also as an item of great importance, that the export tax on rubber is less than one-quarter of that exacted by Brazil and a little smaller than the one fixed by Bolivia. For this reason the country is especially favorable for the extension of the rubber industry.

Bolivia. The products of Bolivia are like those of Peru except that its agricultural resources are as yet little developed. Hence there is more importation of food stuffs; flour is an article of export from the United States, as well as preserves and suet. Canned stuffs are useful to the mining and railroad people. Cartridges, leather goods, soap, kerosene, furniture, clothing, dynamite, firearms, copper wire, iron and steel, vinegar, Florida water, wood, agricultural tools, mining machinery, lard, cotton, cameras, sewing machines, typewriters are other imports.

Bolivia presents excellent opportunities for mining. Tin of first importance, silver, copper, and bismuth are now the chief mineral exports, although rich deposits of gold are attested.

The *montaña* country presents conditions similar to Peru, for the rubber industry, for the raising of coffee, coca, quinine, and other products. A grain called *quinua*, cultivated on the plateau, is said to be more nutritious than wheat. The alpaca and vicuña here flourish, the former supplying 15 lbs. of wool every other year. Persons who find the plateau region cheerless might enjoy the agricultural section part way down the eastern slope of the mountains; thus a San Francisco gentleman, many years resident of the Garden City, Cochabamba, over whose climate and future prospects he speaks with enthusiasm. Tarija, farther south, has a delightful climate and equal prospects.

One American living on the plateau has been doing a thriving business by making monthly trips to the interior 150 miles

to the east, selling goods at the *haciendas* and the Indian villages, \$10,000 worth on a trip, and bringing back fruit and vegetables to the cities above.

The several lines of railway just completed and several more in construction make certain the immediate development and rapid progress of this country. The possibilities for the production of wool are very large and also for cattle raising. The climate of a large part of the country is healthful and agreeable, and residence in La Paz and other cities is enjoyed by many Americans. Bolivia's rapid development and prosperity is assured.

Chile. The country of Chile, curiously unique in shape, being excessively long and thin, extends over 2000 miles from north to south, with a width of from 105 to 248 miles from east to west. Although so narrow, it has each way three well marked divisions: from north to south, the rainless, desert and nitrate region, within and near the tropics; the temperate central section, a rich agricultural district with considerable rainfall; and the southern portion, with too much precipitation, rain, snow, and fogs, largely a forest land with some swamps and grazing country. Along the entire shore runs the Coast Cordillera with an altitude ranging from 1000 to 6000 or 7000 feet; then comes a plateau or valley, in the far south a drowned valley with straits and fjords, and at the east the great Andes Mts., the height of which forms the eastern boundary line.

A variety of climate and scenery is obviously presented, agreeable to dwellers in the Temperate Zone. Aside from the strictly tropical productions, almost everything found in Peru and Bolivia is here provided; minerals galore, especially copper, iron, and coal, with gold, silver, etc., in addition to the world famed nitrates, and iodine. Petroleum and natural gas have recently been discovered. Noted, like California, for its fine fruits and vegetables, the central section affords ample field to increase their production. Here, too, the raising of grain and of forage plants is extensively practiced; stock farming is a great source of wealth, Chilean horses are of noted excellence, and cattle flourish. Viticulture and apiculture are profitable, the export of honey being important. At the south, the growing lumber business offers a fine field to

experts, as well as the valuable fisheries. The already large sheep raising interests are chiefly in the territory of Magellan. The canning industry both as to fruits and fish may be developed with great profit. Manufactured goods are produced to the extent of \$130,000,000 worth a year. Railway building, which has been rapidly progressing, will for some years continue to be an important field of labor. The Government has planned to expend within this decade many millions of dollars for public works, hydraulic and maritime, for irrigation, public buildings, and railways.

The imports include such things as sugar and coffee, also petroleum from Peru; from the United States, mineral products, especially steel and coal, with machinery of various kinds, paper, vegetable produce, textiles, chemicals, etc.

Presenting conditions similar to our own West Coast, including the earthquakes, the British and German settlers in the country have as much enthusiasm for their new home as have immigrants to California. In scenery, climate, and opportunities, Chile offers unusual attractions.

I had forgotten to state that valuable oyster beds exist in the Gulf of Ancud, and that on the island of Chiloe two crops a year of excellent potatoes may be grown.

Argentina. Argentina with its great plains is entirely different from the West Coast countries. From its configuration, its development, especially its railroad building, has been a far simpler proposition. It was easy to raise cattle and with the profits thus obtained to cultivate immense agricultural properties. Almost every kind of vegetable production is to be found in this great Republic, and the rewards of agriculture and stock raising have been quite equal to the wealth of the mines elsewhere and far more useful.

The plague of locusts is an occasional drawback, but not serious enough greatly to interfere with the grand total of production. As the boundaries on the west extend along the height of the Andes, some mineral wealth exists on their slopes, but the possibilities in stock and wheat raising have been too attractive for much attention to be devoted to mining matters. The agricultural products, wheat, oats, and linseed run up into millions of tons; the quantity of exports of these sur-

passes in value those of the United States, while that of meat exported is vastly greater. With their small population relative to the extent of territory it is certain that for many years Argentina will raise cattle and sheep enough to help out the more thickly settled portions of the globe. To enter into such enterprises to-day of course capital is needed, though some of the present day millionaires went thither with nothing and worked their way to fortune. Wages for mechanics are good, and in some other lines, but expenses also are large. According to the number of inhabitants Argentina has more railways than the United States, though not in proportion to the extent of territory. Almost everything is imported into the country except meat and agricultural products, our share of the imports being less than half that of Great Britain.

The northern and southern sections of Argentina still afford splendid opportunities to the pioneer, presenting a wide choice of climate and variety of employment. In the tropical and sub-tropical regions of the north are immense forests for exploitation with quebracho, laurel, palms, and woods in endless variety, lands suitable for the culture of coffee, sugar cane, yerba mate, cotton, rice, hemp, mandioca, and banana, and in places farther south or on uplands, soil for barley, wheat, corn, alfalfa, tobacco, the vine, etc.

The central pampa is of course the especial region for cereals, wheat, corn, and flax, and this is not entirely pre-empted. In Patagonia at the south there is a great field for raising cattle, sheep, goats, horses, guanaco, and the ostrich, as for alfalfa, wheat, and barley, though in the greater part irrigation is necessary for agriculture. With moderate capital pioneers of experience and skill should be able to amass large fortunes.

From lack of coal, if not of water power, it is probable that agricultural and animal products will long continue to be the chief exports of Argentina and that manufactured goods will be the principal imports. Textiles and manufactures of these are of the greatest value, iron and steel articles come second, railway cars and equipment and other vehicles third, then come building materials, earth, stone and coal, and so on, every kind of merchandise in use in a civilized country.

Goods that sell in New York and Paris are likely to sell in Buenos Aires, only—the Pure Food Law is strict. Chicago hams are barred, though British hams are admitted.

Our farming machinery and tools have been largely sold, yet by some the machinery is called too light to last and an English make is preferred. An Australian machine, called a *cropper*, a thrasher and harvester combined, has been received with much favor. Duties generally are very high.

For successful competition in foreign markets, the highest grade of our goods must be presented and business contracts strictly carried out.

Paraguay, with a healthful sub-tropical climate, possesses splendid forests with woods similar to those of the Argentine Chaco, great plains supporting many herds of cattle, and land capable of producing excellent cotton, tobacco, fruit, and all kinds of tropical growths. The *yerba mate* which grows wild, but may be cultivated, is one of the chief exports, bound to increase rapidly, as the beverage, more healthful than tea or coffee, is extremely popular even with the European immigrants, and in foreign countries. Hides, quebracho extracts, and timber are exports of still greater value. The character of the imports is much the same as in the neighboring countries. Railroad building is going on, and in spite of recent war, internal development is in progress. Railway material is free of duty as is the case also with agricultural and industrial machinery, ship building material, wire fencing, etc.

Uruguay, with a fine temperate climate and a pleasant rolling country, is attractive to settlers with an eye to cattle raising or agriculture. Americans of this class, as well as business men and investors in any line, are cordially welcomed by Uruguayans, and finding the atmosphere more homelike than in some other places they are well content to stay. While agriculture and the live stock industry are the chief activities, there are local manufacturing interests which do not, however, begin to supply the market. Railway extension is in progress, and the navigable rivers are an important accessory.

By far the greatest export is animal production, including wool, skins and hides, meat and meat extracts, etc., while agricultural products are a distant second.

The imports are similar to those of Argentina, including practically everything which it does not export.

Brazil, like Peru, embraces within its borders an immense variety of resources, and a considerable though smaller diversity of climate. On the highlands of the tropics it is comfortably cool, as well as in the south. In many quarters it is temperate and even subject to frost, in a few places to snow.

The magnitude of its wealth in rubber, coffee, and all tropical and sub-tropical productions is well understood; the richness of its mineral deposits is less known. Still less perhaps is the fact that Brazil is larger than the United States proper, and that it contains six cities of 100,000 or more population, including one of 400,000, São Paulo, and Rio with approximately a million.

Everything is included within her boundaries, and whatever one's taste in business, apart from polar exploration, there is room for its gratification here—opportunities for the settlement of colonies in delightful climate and surroundings on the richest soil, if persons care to indulge in agriculture, and locations equally favorable for entering into mining or commercial industry. Cattle raising is a growing occupation. Food stuffs in Rio being very dear, market gardening could be engaged in to excellent advantage in many spots on the highlands at no great distance by rail from the capital. A similar opportunity exists near Buenos Aires, though as land in the vicinity is held at a high price it would be necessary to go farther out on the railway, or across the river into Uruguay.

The coffee plantations of Brazil are already so extensive as to make entrance into that business undesirable if not impossible, except by the purchase of plantations already in bearing. Aside from coffee and rubber, the chief agricultural products are rice, cotton, sugar, *yerba mate* or Paraguay tea, mandioca, and cacao, or cocoa. Many manufactured goods are now produced, mainly of the ordinary necessities of life, leaving plenty of room for importation. It is desired to increase such industries. Inducements are offered by the Federal Government for establishing ironworks, the State of Rio has granted large privileges to the first flour mill, and a subsidy to a firm making paper from the reed *papyrus* which

grows all along the coast. Manufactures of rubber would be very profitable on account of the 20 per cent export tax on rubber and the high tariff on imports. Steam laundries, fruit canneries, chemical works, and other industries may be inaugurated to advantage in various places.

From the United States is imported a great variety of articles, railway cars and locomotives, automobiles, machinery of many kinds, sewing machines, typewriters, apples, general merchandise, and other articles without end.

Railways are being rapidly extended and planned for the future, and aside from the rubber business every kind of industry and commercial activity may be pursued amid agreeable and healthful surroundings.

It is desirable that one wishing to enter into business of any kind in South America should make the tour and see for himself the character of the country and the opportunities offered. At the very least, he should read a number of the many books which have been written, although some of these contain a few errors and others which have been published ten years give wrong ideas on account of the rapid changes; from perusing several of the latest works a fair idea of conditions will be gained. Also the poor consuls will be grateful, both those of the United States in foreign countries and *their* representatives here, if people will at least use an atlas and a geographical reader if nothing more before writing letters, so that they will not bother these hard-worked officials with absolutely foolish questions. It should not be necessary for consuls to give information which every schoolboy *ought* to possess, although I fear he does not.

When children and grown people are ignorant of the names of the capitals of the various States in the Union, it is perhaps too much to expect them to know whether Lima is on the East Coast or the West, or whether Argentina is a breakfast food or a fish. If my labors incite others to seek further information and especially to make the delightful South American Tour, I shall feel that I have performed a genuine service.

BIBLIOGRAPHY

A list of some recent books on South America is appended. By no means complete, it includes works for the most part easily obtainable. While some of these present merely superficial observation, and few profess to be exhaustive, all to the average reader will be more or less instructive and entertaining. A legitimate difference of opinion exists as to people, places, and possibilities; other contradictory assertions arise from too hasty judgments. Errors, however, are generally of minor importance, although in some cases wrong impressions of people and places are conveyed. On account of rapid changes the books published within the last five or eight years are especially valuable; yet some of those earlier written supply important information on particular subjects. To gain a fair idea of the various countries several general works should be read and a few of those on the individual Republics.

Monographs on each of these, published by the Pan American Union, may be procured at \$1.00 a copy.

The large and handsomely illustrated volumes on Peru, Bolivia, Chile, and Brazil by Marie Robinson Wright, with some negligible extravagance of compliment, contain much that is of value and hardly procurable elsewhere; historical information and descriptions of the general aspect, the resources, and the conditions of the various countries, presented with unusual fulness, accuracy, and elegance.

SOUTH AMERICA IN GENERAL

PAN AMERICAN UNION—PEACE, FRIENDSHIP, COMMERCE.

John Barrett. Washington, Pan American Union. 1911.
\$1.00.

LATIN AMERICA, ITS RISE AND PROGRESS. F. Garcia Calderon.

New York, Charles Scribner's Sons. 1913. \$3.00.

SOUTH AMERICA. William D. Boyce. Illustrated. Chicago,

Rand, McNally & Co. 1913. \$2.50.

- ACROSS UNKNOWN SOUTH AMERICA. W. Savage Landor. Boston, Little, Brown & Co. 1913.
- THROUGH SOUTH AMERICA. H. W. Van Dyke. New York, Crowell Publishing Co. 1912. \$2.00.
- SOUTH AMERICA, OBSERVATIONS AND IMPRESSIONS. James Bryce. New York, The Macmillan Co. 1912. \$2.50.
- SOUTH AMERICA. Forrest Koebel. With colored illustrations. New York, The Macmillan Co. 1912. \$5.00.
- A WOMAN'S WINTER IN SOUTH AMERICA. Charlotte Cameron. Boston, Small, Maynard & Company. 1912. \$1.50.
- HISTORY OF SOUTH AMERICA. C. E. Akers. New York, E. P. Dutton & Co. 1912. \$6.00.
- SOUTH AMERICAN ARCHAEOLOGY. T. A. Joyce. New York, G. P. Putnam's Sons. 1912. \$3.50.
- SOUTH AMERICAN PROBLEMS. Robert E. Speer. New York, Student Volunteer Movement. 1912. 75 cents.
- SOUTH AMERICA TO-DAY (ARGENTINA, URUGUAY, BRAZIL). G. E. B. Clemenceau. New York, G. P. Putnam's Sons. 1911. \$2.00.
- FOLLOWING THE CONQUISTADORES ALONG THE ANDES AND DOWN THE AMAZON. H. J. Mozans. New York, D. Appleton & Co. 1911. \$3.50.
- THE LAND OF THE SOUTHERN CROSS. Charles Warren Currier. Spanish American Pub. Society. 1911. \$1.50.
- ACROSS SOUTH AMERICA. Hiram Bingham. Boston, Houghton, Mifflin Co. 1911. \$3.50.
- GREAT STATES OF SOUTH AMERICA. Charles W. Domville-Fife. New York, The Macmillan Co. 1910. \$4.50.
- PRACTICAL GUIDE TO SOUTH AMERICA. Albert B. Hale. Boston, Small, Maynard & Company. 1909. \$1.00.
- THE ANDEAN LAND. Two Volumes. Chase S. Osborn. Chicago, A. C. McClurg & Co. 1909. \$5.00.
- A PLEASURE PILGRIMAGE IN SOUTH AMERICA. C. D. Mackellar. London, John Murray. 1908.

- THE OTHER AMERICANS. Arthur Ruhl. New York, Charles Scribner's Sons. 1908. \$2.00.
- THE CONTINENT OF OPPORTUNITY. Francis E. Clark. New York, Fleming H. Revell Co. 1907. \$1.50.
- THE SOUTH AMERICANS. Albert B. Hale. Indianapolis, Bobbs-Merrill Co. 1907. \$2.50.
- PANAMA TO PATAGONIA. Charles N. Pepper. A. C. McClurg & Co. 1906. \$2.50.
- THE LAND OF TOMORROW. J. Orton Kerbey. New York, The Author. 1906. \$1.50.
- THROUGH FIVE REPUBLICS (including Brazil, Uruguay, Argentina). P. F. Martin. New York, Dodd, Mead & Co. 1906. \$5.00.
- A COMMERCIAL TRAVELER IN SOUTH AMERICA. Frank Wiborg. McClure Phillips. 1905. \$1.00.
- THE SOUTH AMERICAN REPUBLICS. Thomas C. Dawson. 2 Vols. G. P. Putnam's Sons. 1904. Each \$1.50.
- AROUND AND ABOUT SOUTH AMERICA. Frank Vincent. New York. D. Appleton & Co. 1890. \$5.00.
- EXPORTERS' ENCYCLOPEDIA (Information as to shipments for every country). New York. 1913. \$7.50.

PANAMA.

- THE PANAMA GUIDE. J. O. Collins. Panama, Vibert & Dixon. 1912. \$1.50.
- PANAMA AND THE CANAL TODAY. H. A. Forbes-Lindsay. Boston, L. C Page & Co. 1912. \$1.20.
- PANAMA CANAL, WHAT IT IS, WHAT IT MEANS. John Barrett. Washington, Pan American Union. 1913. \$1.00.
- PANAMA, PAST AND PRESENT. Farnham Bishop. New York, Century Co. 1913. 75c.
- THE PANAMA GATEWAY. Joseph Bucklin Bishop. New York, Charles Scribner's Sons. 1913. \$2.50.

ISTHMIAN TOURISTS' GUIDE AND BUSINESS DIRECTORY. Isthmian Tourists' Guide and Directory Co. 1912. \$1.50.

ECUADOR.

TRAVELS IN THE WILDS OF ECUADOR. Alfred Simpson.

TRAVELS AMONG THE GREAT ANDES OF THE EQUATOR. Sir Edward Whymper. New York, Charles Scribner's Sons. \$2.50.

PERU.

THE OLD AND THE NEW PERU. M. R. Wright. Philadelphia, George Barrie. 1908. \$10.00.

PERU IN 1906 BY ALEXANDER GARLAND. Translated by George R. Gepp. London. 1907.

PERU, ITS FORMS AND ITS PRESENT CIVILIZATION. C. R. Enock. New York, Charles Scribner's Sons. 1908. \$3.00.

THE INCAS OF PERU. Sir Clements Markham. New York, E. P. Dutton & Co. 1910. \$3.00.

PERU OF THE TWENTIETH CENTURY. P. F. Martin. London, Longmans, Green & Co. 1911. \$4.20.

THE ANDES AND THE AMAZON. C. R. Enock. New York, Charles Scribner's Sons. 1910. \$1.50.

A SEARCH FOR THE APEX OF AMERICA. Annie S. Peck. New York, Dodd, Mead & Co. 1911. \$3.50.

PACHACAMAC. Max Uhle. The University of Pennsylvania. New York, D. Appleton & Co. \$10.00.

PERU, ITS STORY, PEOPLE AND RELIGION. Geraldine Guinness. New York, Fleming H. Revell Co. 1909. \$2.50.

PERU (chiefly archaeological). E. George Squier. New York, Harper & Bros. 1877.

THE CONQUEST OF PERU. William H. Prescott.

GUIDE TO PERU. A. de Clairmont.

BOLIVIA.

BOLIVIA, THE CENTRAL HIGHWAY OF SOUTH AMERICA. M. R. Wright. Philadelphia, George Barrie. 1907. \$10.00.

THE BOLIVIAN ANDES. Sir Martin Conway. New York, Harper & Bros. 1901. \$3.00.

ACROSS THE ANDES. C. J. Post. New York, Outing Pub. Co. 1912. \$1.75.

A SEARCH FOR THE APEX OF AMERICA. Annie S. Peck. New York, Dodd, Mead & Co. 1911. \$3.50.

CHILE.

MODERN CHILE. W. H. Koebel. New York, The Macmillan Co. 1913. \$3.00.

CHILE AND HER PEOPLE OF TODAY. Nevin O. Winter. Boston, L. C. Page & Co. 1912. \$3.00.

CHILE; ECONOMIC AND SOCIAL PROGRESS. Julio Pérez Canto. Chicago, Rand, McNally & Co. 1912. \$1.00.

THE REPUBLIC OF CHILE. M. R. Wright. Philadelphia, George Barrie, 1905. \$10.00.

CHILE. G. F. Scott Elliott. Charles Scribner's Sons. 1911. \$3.00.

ACONCAGUA AND TIERRA DEL FUEGO. Sir Martin Conway. London, Cassell & Co. 1902. \$3.00.

THE HIGHEST ANDES. E. A. Fitz Gerald. New York, Charles Scribner's Sons. 1899. \$6.00.

ARGENTINA.

MODERN ARGENTINA. W. H. Koebel. Boston, Dana Estes and Company. 1912. \$3.50.

ARGENTINE YEAR BOOK. Information as to Patents, Banks, Industries, etc. Buenos Aires, Robert Grant & Co. London, Ledger, Son & Co. 1912. \$10.00.

ARGENTINA PAST AND PRESENT. W. H. Koebel. New York, Dodd, Mead & Co. 1911. \$4.00.

ARGENTINA AND HER PEOPLE OF TODAY. Nevin O. Winter. Boston, L. C. Page & Co. 1911. \$3.00.

ARGENTINE PLAINS AND ANDINE GLACIERS. Walter Larden. New York, Charles Scribner's Sons. 1911. \$3.75.

ARGENTINA. W. A. Hirst. New York, Charles Scribner's Sons. 1912. \$3.00.

THE REPUBLIC OF ARGENTINA (historical and descriptive). A. Stuart Pennington. New York, A. Stokes & Co. 1910. \$3.00.

THE ARGENTINE IN THE TWENTIETH CENTURY (valuable as to industries, business and resources). A. B. Martinez and Maurice Lewandowski. Boston, Small, Maynard & Company. \$3.50.

FORTY YEARS IN THE ARGENTINE REPUBLIC. Arthur E. Shaw. London, Elkin & Matthews.

THE ARGENTINE REPUBLIC (for exporters). New York, J. P. Santamarina, 80 Wall St. 1911. \$2.50.

PARAGUAY.

UNKNOWN PEOPLE IN AN UNKNOWN LAND. W. Barbrooke Grubb. London, Seeley & Co. 1911.

PICTORIAL PARAGUAY. A. K. Macdonald. C. H. Kelly. 1911. \$4.00.

IN JESUIT LAND (Jesuit Missions of Paraguay and Argentina). W. H. Koebel. 1912. \$3.00.

PARAGUAY. M. E. Hardy. New York, Charles Scribner's Sons. 1913. \$3.00.

URUGUAY.

URUGUAY. W. H. Koebel. Charles Scribner's Sons. 1911. \$3.00.

BRAZIL.

THE NEW BRAZIL. M. R. Wright. Philadelphia, George Barrie. 1908. \$10.00.

BRAZIL. Pierre Denis. New York, Charles Scribner's Sons. 1911. \$3.00.

UNITED STATES OF BRAZIL. Charles W. Domville-Fife. New York, James Pott & Co. 1911. \$2.50.

- BRAZIL IN 1912 (for business men). J. C. Oakenfull. Distributed gratis by the Pan American Union. Washington.
- BRAZIL AND HER PEOPLE OF TODAY. N. O. Winter. Boston, L. C. Page & Co. 1910. \$3.00.
- THE SEA AND THE JUNGLE. H. M. Tomlinson. New York, E. P. Dutton & Co. 1913. \$2.50.
- THE FLOWING ROAD. Caspar Whitney. Philadelphia, J. B. Lippincott Co. 1912. \$3.00.
- IN THE AMAZON JUNGLE. A. Lange. New York, G. P. Putnam's Sons. 1912. \$2.50.
- BY HORSE, CANOE, AND FLOAT THROUGH THE WILDERNESS OF BRAZIL. W. A. Cook. New York, American Tract Society. 1910. \$1.25.
- BRAZIL OF TODAY. Arthur Dias (Interesting and valuable). Lanneau & Despret, Nivelles, Belgium.
- BRAZIL, THE AMAZONS AND THE COAST. H. H. Smith. New York, Charles Scribner's Sons. 1870. \$5.00.
- AMERICAN CONSUL IN AMAZONIA. James Orton Kerbey. 1911. \$2.50.

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